ANNUAL INDEX • 1936

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The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN

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1937

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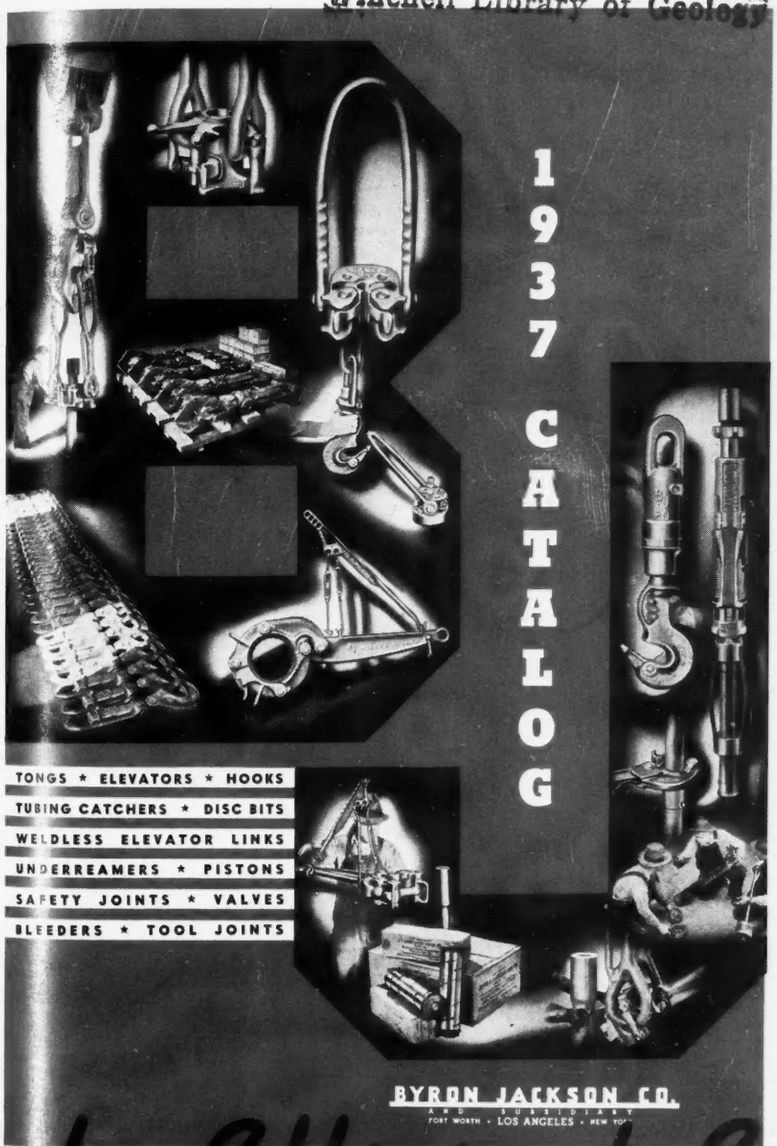

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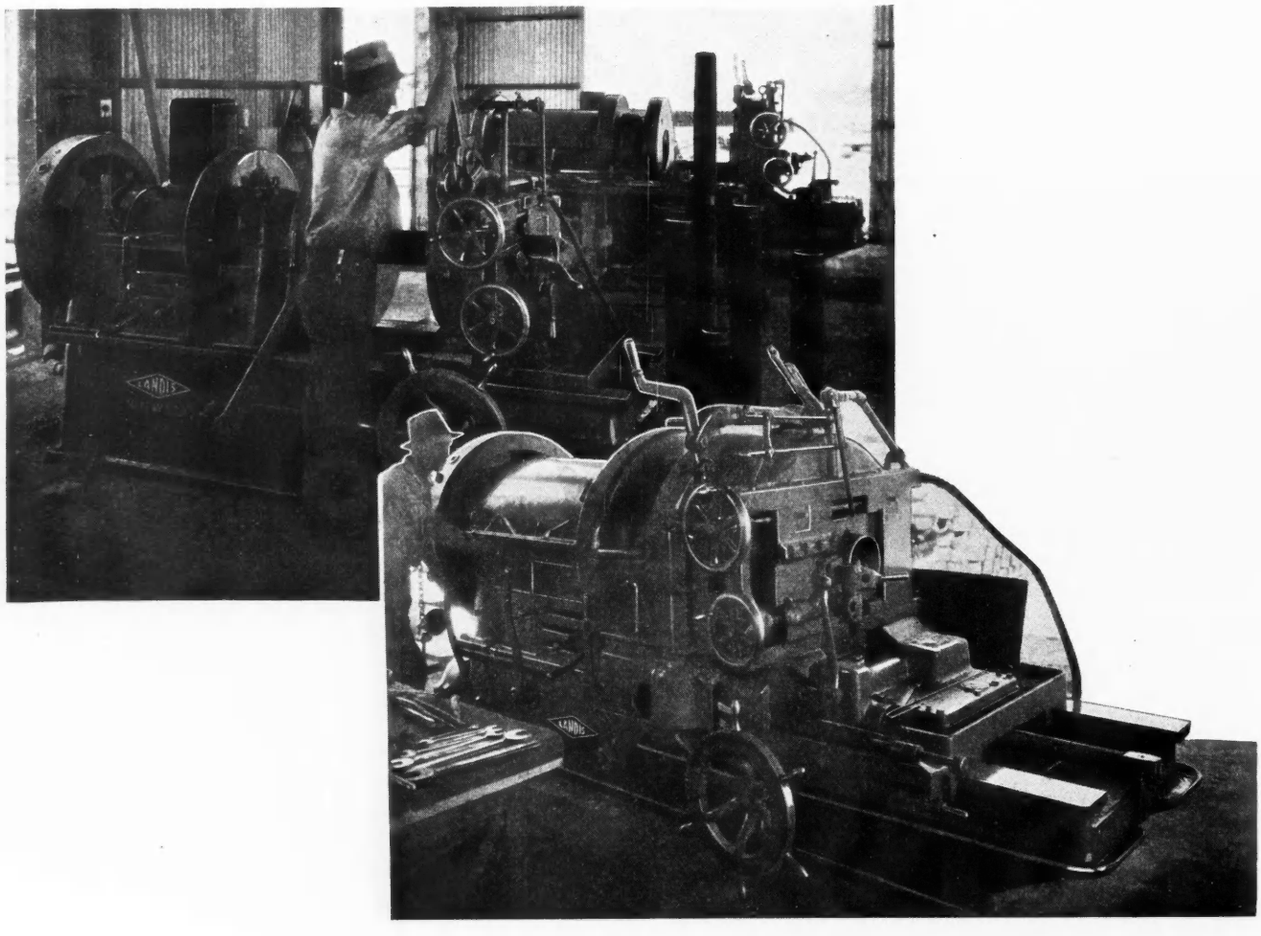

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Next Week

WITH 40 to 50 percent of the United States production produced by flowing wells much importance is attached to present studies of factors influencing the flow of oil through various sizes of pipe. S. F. Shaw, consulting engineer, will add his thoughts to the subject. His conclusion is that whatever the conditions, flowing pressure will very closely govern the quantity of liquid producible through a given size flow string. It therefore is important to study the relationship existing between flowing pressure and production before completion, as afterwards the conditions cannot be changed easily.

SO as to obtain full protection from corrosion, an unusual screen, liner, packer and casing combination has been run in the Goose Creek field of Texas. The assembly, which includes bronze screen, liner, bushing and packer, plus a string of cement-lined pipe that was landed on the packer by means of a bronze-lead seal, will be described and discussed.

A DUAL purpose manifold being used on a Kansas gas repressuring project will be the subject of an article. It provides for more exact and accurate control of injection volumes and rates, yet is very simple in design and operation.

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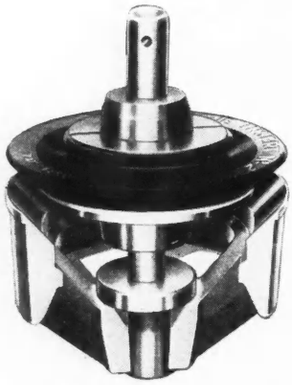

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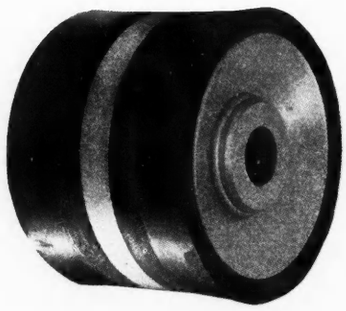

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ENGINEERING NEWS STATISTICS

WARREN L. BAKER, Editor

. . . this Week

IMPORTANT developments that will begin to untangle the knot of legal technicalities now involved in the government's prosecution of the oil industry for alleged anti-trust law violations are expected in Madison this week. Defense motions attacking the first two indictments on the ground the jury was selected illegally will be heard January 7. Hearings will be held at the same time on objections of the second jury using evidence procured by the first body of jurors. Removal hearings will be held in several cities during the week. **Page 8.**

THE regular monthly Oklahoma proration hearing was featured by the fact only one company requested an increase in the state's production allowable during January. As a result, it is believed the state will accept the Bureau of Mines' suggested allocation of 573,100 barrels daily. This figure is 6100 barrels higher than the bureau's December recommendation, but 22,250 barrels lower than the allowable finally set by the state. **Page 9.**

CRUDE oil prices in Pennsylvania were advanced 12 to 15 cents per barrel last week. The increases were attributed to continued heavy demand. The higher Pennsylvania prices caused additional predictions that all Mid-Continent purchasers would soon post better schedules. Reports were that it would amount to 12 cents instead of the 17-cent increase effective January 4 by several concerns in the Mid-Continent. **Pages 9 and 43.**

MANY cementing failures should be attributed to carelessness, eagerness, or poor judgment on the part of the well owner, and not to the poor quality of the cement or the services of the cementing company. The success of the average cementing job usually depends on the cooperation of the oil operator with the cementing company. There are many small details in which the operators can materially assist and gain great efficiency in his cement results. **Page 19.**

THE industry can look back upon 1936 with a sense of satisfaction, and look forward to 1937, despite certain perplexities, with much hope, according to J. W. Van Dyke, chairman of the board of The Atlantic Refining Company. **Page 10.**

THE famous old Copan tank farm, comprised of 107 tanks of 55,000 barrels capacity each, is giving way to wrecking crews, and a historical landmark of the industry is disappearing. The farm, now owned by Sinclair Prairie Oil Marketing Company, was built 31 years ago. It was an important factor in the World War, when 48,000,000 barrels was withdrawn from this one tank farm alone. It has seen the day of $3.50 per barrel crude and the other extreme—10 cents a barrel. **Page 11.**

The Oil Man's Calendar

JAN. 16–24	**First International Consumers Petroleum Exposition, Detroit, Michigan.**
FEB. 15-19	**American Institute of Mining and Metallurgical Engineers, New York**
MAR. 12	**Interstate Oil Compact Commission, Oklahoma City, Oklahoma.**
17–19	**American Association of Petroleum Geologists, Los Angeles, California.**
APR. 8–10	**Petroleum Industry Electrical Association, Shreveport, Louisiana.**
15–16	**National Petroleum Association, Cleveland, Ohio.**
MAY 6–7	**American Petroleum Institute, Division of Production, Eastern District, Deshler-Wallick Hotel, Columbus, Ohio.**
10–16	**American Gas Association, Natural Gas Department, Kansas City, Missouri.**
JUNE 1–3	**American Petroleum Institute, Mid-Year Meeting, Colorado Springs, Colorado.**
11	**Interstate Oil Compact Commission, Santa Fe, New Mexico.**
17–19	**Pennsylvania Grade Crude Oil Association, S.S. "Seeandbee," Sailing from Buffalo, New York.**

A LENGTHY legislative program confronts the approaching session of Congress. Many laws expire, others are certain to be changed, and there is a large amount of routine business. From the oil industry standpoint, re-enactment of the Connally contraband act, taxes and industrial control are apt to be most important. **Page 8.**

REAL prosperity for the oil industry is expected during 1937 by E. O. Thompson, chairman of the Texas Railroad Commission. He bases this prediction upon a new all-time high in demand, balanced by better production and the lack of important new discoveries during recent months. **Page 10.**

ONE of the most important California discoveries during 1936 was made last week when a wildcat of Standard Oil Company of California was completed for 2600 barrels of 37 gravity oil. The well is 6½ miles north of the Ten Section field and 14 miles west of Bakersfield. **Page 69.**

RESEARCHERS into the problem of breaking oil emulsions will find it profitable to conduct laboratory studies rather than subjecting large batches of crude to different chemicals in the field. Today this may be done because inexpensive laboratory size colloid mills are available, and a sample of emulsion broken down in transit may be re-emulsified. Therefore, much time and money may be saved and more efficient use of chemicals may be obtained. **Page 26.**

Important Hearings

TO UNTANGLE TECHNICALITIES IN TRUST SUIT THIS WEEK

MADISON.

JUST what move would be taken this week to untangle the knot of legal technicalities growing out of the government's prosecution of the oil industry alleged anti-trust law violations remained in doubt late last week.

Defense motions attacking the first two indictments, returned here July 28 and November 7 and involving 26 major oil companies and 70 prominent oil officials, are to be heard before Federal Judge Patrick T. Stone January 7. The indictments are challenged on the ground that the grand jury returning them was not chosen according to the federal judicial code.

Action by government legal forces in obtaining new indictments from a new grand jury two weeks ago, presumably to replace the first set in the event the contention of defense attorneys pertaining to their legality is upheld, materially complicated the situation.

At present there are two sets of indictments, each setting forth the same charges and involving practically the same defendants, before the federal court here.

First Removal Hearings

On the first set, the first of a series of removal hearings through which the government will seek to gain appearance of defendants residing in New York City at Madison for trial will be held in the eastern metropolis January 6.

Similar hearings involving defendants residing in Pittsburgh, Chicago, Tulsa and other centers are to be held closely following the New York removal hearing.

Rumors that the government would seek, at the removal hearings, to substitute the new indictments for those that defense attorneys maintain are illegally drawn were denied here this week by District Attorney John J. Boyle.

"Such stories are entirely without fact," Boyle said.

The district attorney refused to indicate, however, what course the government would take to clear up the confusion and untangle the maze of legal red tape now enveloping the cases here.

If Judge Stone, following the hearing on the plea in abatement filed by defense attorneys to quash the first indictments, finds the indictments faulty and throws them out, it will be necessary for government attorneys to obtain new removal hearings on the new indictments if substitution of the new charges for those returned by the old grand jury had not been previously made.

Whether defense counsel would agree to such a substitution is extremely doubtful. Challenge of the new indictments as having been returned on evidence gathered by the old grand jury has already been made.

Should Judge Stone uphold the old indictments, government forces could use the new set in the event an appeals court should rule in favor of the oil industry following trial, and in the event of conviction in the inferior federal court here.

New Indictment Attack

The first attack on the new indictments will also be forecast here on January 7.

Defense attorneys were unsuccessful in obtaining a restraining order to prevent use of documentary evidence presented to the challenged or old grand jury in hearings before the new investigating body. As a result, government attorneys were able to gain new indictments in a week's time, whereas the first grand jury sat for approximately 50 percent of the time between early May and late November.

Formal objections to Judge Stone's refusal to grant the restraining order were filed by defense attorneys. The hearing on whether an injunction to prevent use of this evidence, to be held January 7, will be a mere formality inasmuch as the material has meanwhile been used. The hearing was set before the new indictments were returned. Filing of objections indicated a test of the new charges are to be made on this issue.

At the removal hearings beginning in other cities this week, government attorneys will be forced to reveal some of the evidence upon which they hope to convict leaders in the oil industry for alleged illegal operation of buying pools designed to "squeeze out" independent jobbers.

The hearings will aid defense attorneys who as yet have little information on which to base the oil industry's defense, except the brief outline contained in the indictments.

Oil and Congress

CONNALLY BILL REENACTMENT LIKELY FEATURE OF SESSION

WASHINGTON.

A LONG session of Congress, running into the summer months, is foreshadowed by the lengthly legislative program with which it must deal, a feature of which from the oil industry viewpoint will be the re-enactment of the Connally contraband oil act, due to expire before the end of the session.

Aside from the Connally act, the questions of outstanding importance to the oil industry are taxes and industrial control. With respect to the former, it is expected no new levies will be imposed, and a few of the non-paying nuisance taxes may be repealed, although it is not expected that the group to be abandoned will include any of the oil levies. There is no probability that the administration will recede from its stand on the undistributed corporate income tax becoming effective this year for the first time.

Industrial Control Is Complex

Industrial control is a more complex subject and a score of bills, dealing with the question in various ways, are expected to be introduced. These measures will range from a suggestion for a constitutional amendment to redefine the term "interstate commerce" so as to give the government authority to deal with labor and social problems, through the O'Mahoney bill for federal incorporation and licensing of corporations engaged in interstate commerce and expansion of the anti-trust laws to make unfair treatment of labor an unfair method of competition, to revival of the NRA in such form as to meet the objections raised to the original act by the Supreme Court.

Amendment of the Walsh-Healey government-contracts act, which is not working out as well as expected, is anticipated, as is also some tinkering with the Robinson-Patman price discrimination act, expansion of which is planned by Representative Patman of Texas through a bill he has prepared which would prohibit manufacturers or producers from engaging in retail distribution. The bill, if enacted, would become effective three years after its passage, affording manufacturers an opportunity to dispose of their retail outlets without loss or disruption of business.

Expect Tariff Extension

Extension of the reciprocal tariff legislation, due to expire in June, will, it is expected, involve an effort to amend the act so as to restore to the Senate its old authority to review and ratify treaties, although it is expected President Roosevelt will strongly oppose such a concession.

A number of other emergency laws also expire during the next few months. Practically all the measures lapsing during the coming year will be extended, it is believed.

In addition to the long list of "must" measures which the President is expected to ask of Congress from time to time, the session will have to consider the usual routine appropriation bills for the various permanent departments, bureaus and commissions and make provision for the financing of such of the emergency organizations as are to be continued.

With such a lengthy program of legislation before it, experienced observers in Washington believe it will be impossible for Congress to adjourn before July.

Higher Oil Prices

HEAR RUMORS MAJORS TO MEET ADVANCE JANUARY 4

HOUSTON.

THE crude oil price situation in the Mid-Continent district remained unchanged as the week closed, insofar as other concerns meeting the 17-cent increase announced for January 4 by Continental Oil Company and others some time ago. Apparently most major purchasing concerns were ready to raise the price if some other large firm would take the initiative.

A number of executives told The Oil Weekly over the phone that their companies had not reached a decision to post an increase, but that undoubtedly they would increase if a single large purchaser made the move.

Many Rumors Circulating

Of course, rumors were rife, and these were given additional foundation because of the 15-cent per barrel increase in Pennsylvania last week (see page 43). One rumor had it that Humble Oil & Refining Company and Stanolind Oil & Gas Company contemplated a 15-cent increase effective January 4. Other rumors said that the price would be advanced anywhere from 12 to 15 cents a barrel, while a few anticipated that the 17-cent advance of Continental Oil Company would be met.

Officials of both Humble Oil & Refining Company and Stanolind Oil & Gas Company were contacted New Year's Day, but at that time knew nothing of any plans by either company to boost the price of crude and based the rumors as being entirely without foundation.

Continental to Stick

"I do not know what other companies are going to do," Dan Moran, president of Continental Oil Company, said New Year's Day when asked what were the latest developments on the price raise his company had scheduled for January 4. "But we don't give a darn what they do—we are going through with the price increase as scheduled."

Action of the Oklahoma Corporation Commission in pledging that Oklahoma would be held within the Bureau of Mines recommended figures if a price raise were forthcoming from major purchasers tended to strengthen the belief that an increase would come. Price increases in Eastern States (see page 43), though having no material bearing on Mid-Continent prices, did not weaken the feeling that crude was due for a general price raise. Many remember when price increases started in the Eastern States and moved almost invariably in a wave over the rest of the country.

The thought was met that the major companies might wait a week after January 4 before initiating price increases. However, connections are becoming more and more desirable, and if other companies follow a week or two later the lead already made by Continental Oil Company and those who have already raised will have a certain strategic advantage which may be valuable later on.

The conclusion to be drawn from this investigation of executive opinions apparently was that if one large purchaser of crude oil would make the first move the others will follow immediately. Moreover, a concensus of opinion was, this would occur when some concern was faced with losing a few important production connections — if not sooner.

Stay With Bureau

ONLY ONE OKLAHOMA CONCERN SEEKS JANUARY OUTPUT RAISE

OKLAHOMA CITY.

WITH only one company seeking an increase in crude oil allowables for the month of January, the Oklahoma Corporation Commission, in session here December 29, heard recommendations from oil operators in the state, and W. J. Armstrong, chief conservation officer, that the state's production allowable for the month be held to the United States Bureau of Mines figure of 573,100 barrels daily.

The new quota is an increase of 6100 barrels from the Bureau's December estimate, but is a decrease of 22,250 barrels from the allowable of 595,350 barrels finally settled upon by the commission for last month.

Champlin Refining Protests

Champlin Refining Company, represented by C. C. Peppers, sought an additional 5000 barrels of oil daily, to come from the Oklahoma City field or any other field from which the commission might grant the increase. Peppers explained his company needed 150,000 barrels additional crude during January, and that it would take the crude at the posted price. When questioned, Peppers asked that the additional oil be allocated to the Oklahoma City Wilcox zone, but expressed doubt as to the ability to get the amount.

The suggestion by Armstrong that if the market demand is found by the commission to be more than the bureau estimate, certain pools, such as Oklahoma City Wilcox, Edmond, Moore, Crescent, Billings, and the Fitts-Upper Simpson and Fitts-Wilcox pools, could find a market for more crude, received backing from many of the operatives present.

Theo Morgan, Kansas umpire, stated the Sunflower state plans to boost the January allowable about 9000 barrels daily, a figure about 6.19 percent above the bureau estimate. The high figure cited by the Texas Railroad Commission, which is far above the bureau estimate, is thought to be having considerable effect on the rather high figure contemplated by the Kansas commission.

Except for adjustments on five pools, recommendations submitted to the commission remained about the same as those for December. The pools receiving increases were Billings, Jesse, Moore, Fitts-Hunton and the North Bethel field.

SAME ALLOWABLE

California January yield to be below Bureau quota

LOS ANGELES.

CALIFORNIA oil operators will be expected to hold the state's crude production to 551,000 barrels daily, during January, 1937. The Central Committee of California Oil Producers approved the allocation committee's recommendation that the crude quota remain the same as during December despite the United States Bureau of Mines' recommended 559,900 daily.

The state's total for the first 21 days of December averaged 591,000 barrels, and Chairman Lawrence Vander Leck warned operators that they must get down on the line.

RODESSA ORDER

Texas to prorate on basis as Louisiana new rules

AUSTIN.

THE Texas Railroad Commission last week issued an order fixing the allowables for wells in the Rodessa field (Texas side) on the basis of acreage and bottomhole pressure. The order follows closely a similar order issued by the Louisiana Conservation Commission for the Louisiana side of the field, and became effective on January 1.

The Texas order, however, limits the acreage allowance to 20 acres, while the Louisiana order provides for a 40-acre unit. The Texas order also treats alike all units of five acres and less.

A total allowable of 32,175 barrels per day will be distributed among the 120 producing wells in Texas.

Outlook Hopeful

FOR GOOD YEAR, OPINION OF J. W. VAN DYKE

PHILADELPHIA.

THE petroleum industry has good reason to enjoy a sense of satisfaction with its results during the past year, and despite the perplexities which confront it can look hopefully into the new year in the expectation of realizing a substantial increase in demand for its products, in the opinion of J. W. Van Dyke, chairman of the board of The Atlantic Refining Company.

"The year just ended is notable in the annals of the petroleum industry," Van Dyke says. "Its achievements were featured by the establishment of several significant records. Crude oil production in the United States reached an all-time peak of more than 1,090,000,000 barrels. At the same time records were made for the volume of crude oil processed in refineries; for the volume of gasoline manufactured and distributed; and for the footage of wells drilled. Indeed, in 1936 the last named effort reached the stupendous total of 74,000,000 feet. Notwithstanding the increased possibilities for confusion growing out of the marked expansion in its varied activities, the affairs of the industry on the whole were characterized generally by gratifying orderliness.

"In my opinion the oil industry has good reason to enjoy a sense of satisfaction in its 1936 results—a satisfaction which its patrons must of necessity share. For them the industry delivered more products by 65,000,000 barrels than it did in 1929 and charged them a total of $500,000,000 less than in the earlier year.

"This is an accomplishment not equalled by any other integrated industry. It reflects the results of a large volume of scientific research and technological development along a broad front, involving all major divisions of the industry but particularly the crude producing and refining divisions. In the former division, geophysical research, the recent tool employed by the geologist in prospecting for crude oil deposits, alone entailed an expenditure estimated at $14,000,000 and was instrumental in the discovery of upwards of 50 oil pools. In the latter division research has been followed by a rapid expansion in the use of new methods for manufacture. Notable improvements have been effected in the quality and yield of products, as by an extension of the use of the solvent process for the extraction of lubricating oils, the further development of motor fuels of high octane rating and the polymerization of petroleum hydrocarbon gases whereby fuels of extraordinarily high anti-knock rating are produced from material otherwise useful only as a substitute for coal and heavy oils.

"Moreover, despite large price concessions to its public during 1936, equalling 70 cents per barrel from the 1929 average price, and $1.38 per barrel from the 1926 price, the industry has enjoyed a modicum of profit with which to compensate its employes, reimburse its stockholders and expand its services. Although authoritative figures are unavailable, it is likely that the entire industry will show a modest return on investment of approximately 7 percent.

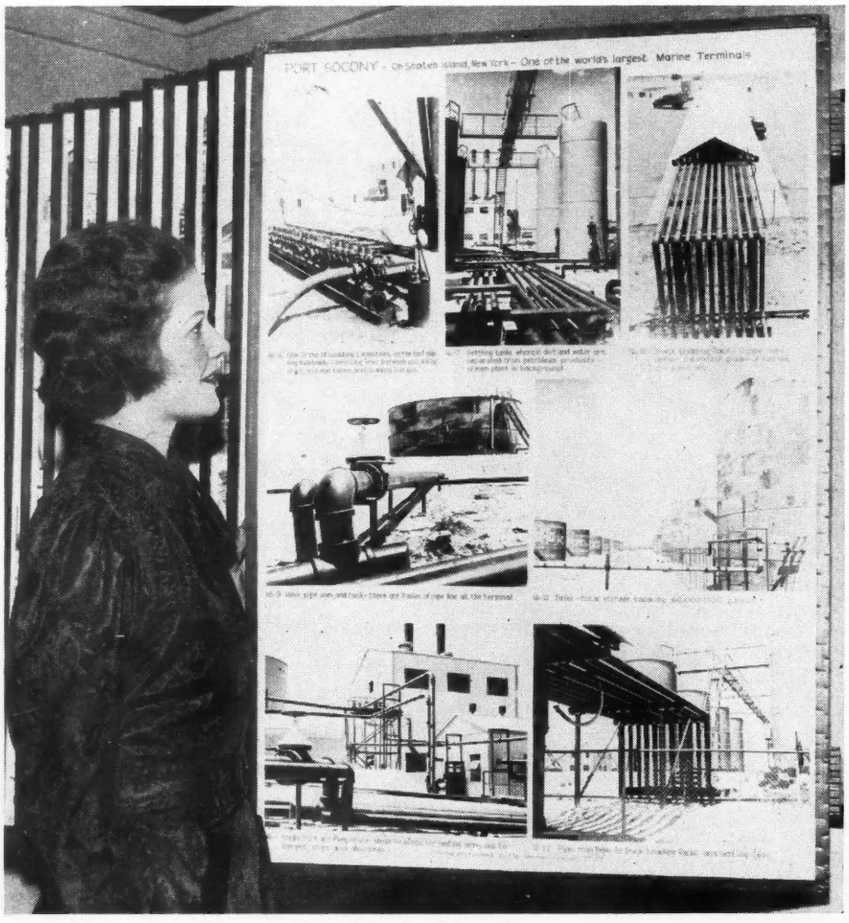
1936 Was Satisfactory

"In view of the persistence of some of the effects of the long depression, the industry's return this year might be considered tolerably satisfactory were it not for the fact that the 1936 profits of other forms of industrial enterprise appear more nearly of the order of 10 percent. This marked difference may reflect the generally higher level of earnings of oil workers and the adverse influence of several conditions which still perplex the industry.

"Among these problems are, first, the need to develop a generally acceptable method for the determination of economic rates of depletion of oil reserves; second, the way to maintain natural equilibrium between the several divisions of the industry; third, a method for avoiding threatened discriminatory taxation; and the re-organization of distribution forces in order to effect adjustment to the new conditions imposed by legislation and the intense competition which results from integrated operation.

"Despite these and other perplexities the industry may look hopefully into the new year in the expectation of realizing a substantial increase in demand for its products, possibly as much as 9 percent. And if with other industries it is able justifiably to offer sufficient opposition to arbitrary and uneconomic regulatory interference it may continue to do a large part in raising the standard of living of the American people."

Museum Gets New Photographs On Oil Industry



A pretty visitor to the Chicago Museum of Science and Industry examines part of the collection of scientific photographs depicting development in the petroleum industry which the museum recently acquired. Presented by Socony-Vacuum Oil Company, Inc., the pictures shown here were made at Port Socony on Staten Island, New York, one of the world's largest marine terminals.

Real Prosperity

DURING 1937 ANTICIPATED BY E. O. THOMPSON

AUSTIN.

REAL prosperity for the oil industry may be expected during 1937, stated E. O. Thompson, chairman of the Texas Railroad Commission. He is of the opinion a new all-time high in demand, balanced by better production control and the lack of important new discoveries definitely indicate such an outlook.

Thompson prepared the following statement at the request of many parties interested in the attitude of the commission toward the oil industry prospects:

"You asked me about the New Year. I can see nothing but hope and promise in it. Certainly consumption will reach new peaks; this applies to oil as well as to other items. Automobiles are being sold very rapidly. Oil cars are being brought back into use. Diesel burning trains are on the upgrade. Three hundred thousand new heating installations have been equipped for the burning of fuel oil. General prosperity is returning. All these lead inescapably to a new all-time high in demand for petroleum and its products. Balanced against this is the best production control that has ever been known in the oil business. No new discoveries of any importance have been lately made. With true conservation being practiced more and more, and with increased consumption, real prosperity is in prospect for the oil business in 1937.

Learning to Prevent Waste

"To my mind, the most important thing of all is the fact that we are really learning how to prevent waste in the production of oil. This, to my mind, answers the question of overproduction. If it is not done in a sane, orderly manner by men, nature promptly steps in in a ruthless manner and does the job with one final smash.

"The outlook for the oil industry in 1937 is extremely ripe. Oil reserves above ground have been reduced fifty million barrels. It is generally conceded that not more than fifty days' supply remains above ground. The state's regulatory authorities are really and truly and sincerely practicing conservation. Physical waste is being prevented. The Oil States Compact has proven to be a legal, constitutional method by which the oil producing states can co-operate to prevent physical waste in the production of petroleum. If waste is prevented in the production of crude oil, current consumption can be met with current production. This means the ideal balance between supply and demand.

Expects 7 Percent Increase

"It is my opinion that the year 1937 will show at least a 7 percent increase over 1936, which, by the way, was a billion barrel oil producing year—it came within a few million barrels of exceeding the all-time peak.

"The outstanding accomplishment of the Railroad Commission of Texas for the oil and gas industry in 1936 was the general recognition by the oil producers that the Railroad Commission of Texas was honestly and truly and effectively endeavoring to prevent actual physical waste in the production of oil. The oil producers have realized in Texas that the Railroad Commission of Texas intends to see to it that Texas shall have her fair share of the market demand and that no more than her fair share of the market demand shall be allowed to be produced. This policy has made it possible to convince our sister oil producing states of the sincerity of the regulatory authorities on oil in Texas to do a real job in waste prevention. This conviction on the part of our sister oil producing states has made the Oil States Compact an outstanding success. The oil industry has come to realize that in order to have a successful legislative

[*Continued on page 44*]

PAST YEAR in . . .

The OIL WEEKLY

IT HAS BEEN SAID **"The real meat of a business paper is its technical content."** This is easy to understand, for a man engaged in a specific field of endeavor must look to his own specialized publications for a moving story of the progress in his particular occupation.

Three years ago, The OIL WEEKLY inaugurated a carefully planned-in-advance engineering or technical editorial program with this thought in mind. The result has been remarkable. In 1934, we proudly proclaimed we had published 211 production and pipe line engineering articles, the two divisions covered by this magazine. Again in 1935, we were proud to display an index of 246 such articles. And now we are publishing the 1936 annual editorial index, and again take pride in our continued improvement and leadership in that we published

293 PRODUCTION AND PIPE LINE ENGINEERING ARTICLES

By using the annual index, to be found on pages 81 to 100 of this issue, the benefits from this material may be increased materially. It has been cross indexed under carefully selected divisions to improve its usability.

During the year 129 different authors contributed to The OIL WEEKLY, of which only 14 were staff writers. The remaining 115 authors were engineers, superintendents, geologists, executives and other operating officials actually engaged in the oil business. Each author wrote one or more articles.

To these authors and others who assisted us in the preparation of the 293 articles we express our thanks.

Largest Tank Farm

AFTER 31 YEARS OF ACTIVE SERVICE BEING DISMANTLED

THERE is chatter of air hammers today as 94 of the 107 tanks on the Copan farm of Sinclair Prairie Oil Marketing Company are giving way to wrecking crews, whereas the rivets were set by hand when this unit of the most extensive storage system within the industry was put in place back in 1905 and 1906.

Many Changes Take Place

The steel plate, no longer safe for holding oil, is being moved off the site in trucks, whereas horse and mule power, wagons, and the upbraiding of the teamsters were the power that brought it to the site when it was new. Another contrast for the 31 years is that a paved highway allows the junk material to get away under a speed that no one dared contemplate back when mud, dust and chug holes had to be overcome to get steel and timbers to the site.

Those tanks at Copan had an important part in the changes that have taken place in the three decades they stood there to be filled, emptied and refilled.

At the turn of the century, Prairie Oil & Gas Company and its transportation affiliate were forced to look beyond the confines of Kansas for more crude oil. As Nelson K. Moody, then vice president of the former company and now president of Sinclair Prairie Oil Marketing Company, puts it:

"We had expert advice to the effect that little more oil could be expected from Kansas fields.

Down in Oklahoma, Bob Galbreath had followed a hunch that resulted in the Glen Pool field, Creek County, Oklahoma. So the Prairie companies started a chain of facilities to help care for the excessive output. The pipe line system was extended southward and along its route tank farms were provided. Over a period of two years Prairie Oil & Gas Company completed 55,000-barrel tanks at the rate of 34 a month.

On that basis, the 107 tanks at Copan represented three months of that schedule. To the south a few miles, at Ramona, however, the crews were busy for more than seven months to provide the 232 tanks, which still stand as the world's largest crude oil tank farm. Other storage was placed at Caney, Kansas, and elsewhere along the pipe line system.

Important During World War

The extent of this storage program can be appreciated by the fact that when the Allies turned to the United States for oil in 1915, Prairie Oil & Gas Company had 54,000,000 barrels in storage. What the World War did to crude oil reserves of the country can be understood by recording that the end of hostilities found this one company with but 6,000,000 barrels of crude oil in storage.

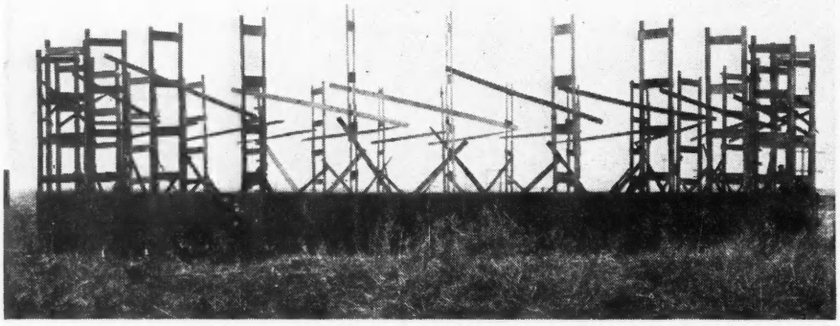
A noted man of England once made a remark to the effect that the Allies floated to victory on a sea of oil. His figure of speech was good but the fact was that the Allied armies were carried to victory on one tankful of oil after another tankful of oil, with this tank farm in the front ranks. The industry in the United States emptied its storage down to the point that it could see the bottom of its tanks before 11 o'clock the morning of November 11, 1918.

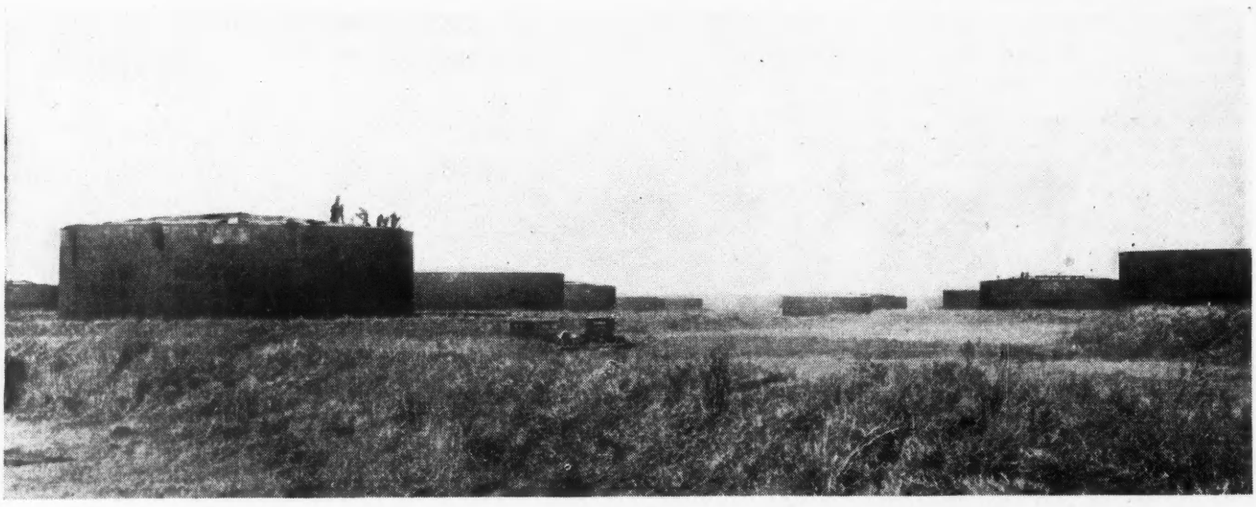
Saw Great Price Fluctuation

It was later that $3.50 was marked up as the value of a barrel of oil. The war had drained above ground storage to the point where the industry had some doubt of its ability to take care of domestic requirements. Chiefly this was the result of the accomplishment of Henry Ford, who back in 1905 saw the automobile as a machine for the masses, provided he could reduce its weight and thereby reduce its price.

The result was that by 1918 there was a home market for more oil than an

[*Continued on page 44*]





After 31 years of active and important service, the 107 tanks of 55,000 barrel capacity each that comprised the Copan, Oklahoma, tank farm of Sinclair Prairie Oil Marketing Company are giving way to wrecking crews. The roof goes first, then the timbers and side walls.

FORGED STEEL UNIONS

BUILT TO ENDURE

HANDLE BAR

STEEL-to STEEL SEATS

BRASS-to BRASS SEATS

3/8" to 4"

Use a hammer instead of wrench to loosen or tighten nut.

Because they are accurately machined from split die forgings of high-manganese open hearth steel, with extra heavy ends and nuts and with nut-threads permanently lubricated, rust-proofed and spark--proofed with Udilyted cadmium, YOUNGSTOWN Forged Steel Unions are impervious to galling, reduce fire and explosion hazards and can be used over and over again.

Each of the four types shown on this page has its own particular applications in which its use gives increased safety, lower costs, or both.

The Handle Bar Union (upper left) is particularly adapted for use on oil loading racks, on stand pipe on drilling rigs and on steam piping on rotary drilling rigs.

Write today for complete descriptive folder, AM-72

THE YOUNGSTOWN SHEET AND TUBE CO.

Manufacturers of Carbon and Alloy Steels

General Offices - YOUNGSTOWN, OHIO

Sheets; Plates; Tubular Products; Conduit; Tin Plate; Bars; Rods; Wire; Nails; Unions; Tie Plates and Spikes.

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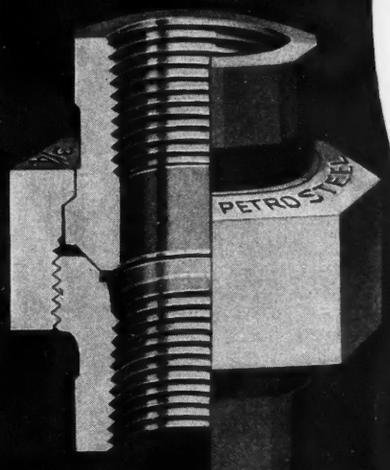
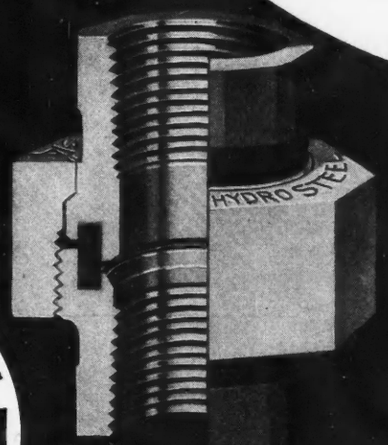


PETRO

STEEL-to-STEEL SEATS

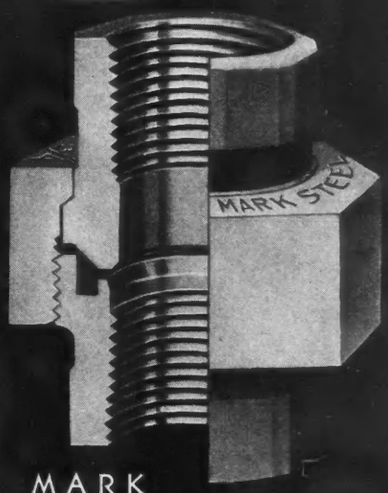
1/8" to 3"



HYDRO

BRASS-to-BRASS SEATS

1/4" to 3"



MARK

BRASS-to-STEEL SEATS

1/4" to 3"

FORGED STEEL TRADE MARK YOUNGSTOWN UNIONS

Youngstown's Unions are furnished Udilyted or black

YOUNGSTOWN

MEN IN THE INDUSTRY'S NEWS

OIL AND GAS ASSOCIATION OF MICHIGAN ELECTS FLOYD C. CALVERT OF PURE OIL COMPANY ITS PRESIDENT

C. E. WRIGHT, as of January 1, 1937, became general superintendent of the production department of British American Oil Producing Company, at Tulsa. Wright joined the company in July, 1936, at which time he took charge of Oklahoma City operations of the firm there. He had previously been division engineer for Indian Territory Illuminating Oil Company at Oklahoma City.

C. V. SIDWELL, in charge of field operations for British American for the past 19 months, is busily organizing the production engineering department of the company and will be its active head.

JOSEPH H. TURNER, for the past five years chief geologist for Pennsylvania Power & Light Company at Wellsboro, Penna., has resigned effective January 1 and will move to San Antonio, Texas, where he will represent eastern connections and be associated with The Loma Oil Company. Before moving to Pennsylvania in 1931, Turner was district geologist for Independent Oil & Gas Company at San Antonio.

GEORGE C. McKINNEY AND EUGENE O. TOLSON have formed a partnership under the firm name of McKinney and Tolson. They will engage in valuation and petroleum engineering work. Offices have been established at 202 Worth building, Fort Worth, Texas.

E. C. MONCRIEF, former chief geologist and head of the land department for Derby Oil Company, has resigned, effective January 1, 1937, to become an independent operator. He will form a partnership with D. R. LAUCK, under the firm name of Lauck and Moncrief, with headquarters at Wichita, Kansas.

HE SUCCEEDS HOWARD D. ATHA WHO HAS HELD THE OFFICE FOUR CONSECUTIVE YEARS

FLOYD C. CALVERT, head of Pure Oil Company's legal division in Michigan, was elected to succeed Howard D. Atha of Gordon Oil Company as president of the Oil & Gas Association of Michigan. Other officers elected for the ensuing year were C. L. Maguire, president of Roosevelt Refining Company, vice president; Haswell W. Grant, attorney, secretary; and W. P. Clarke, head of Gulf Refining Company's Michigan division, and George B. Talbot, president, Talbot Oil Company, co-treasurers.

In retiring from the presidency of the association, Atha rounded out four successive years as the organization's head during the period in which the association was formed and brought to a station of affluence and power in the industry and state. It was largely through his efforts that the association was organized and expanded.

Calvert came to Michigan in 1932 as attorney for Pure Oil Company and has been a director and officer in the association since its organization. Prior to coming to Michigan, he practiced in the Southwest and served terms as county judge of Nowata County, Oklahoma, and as United States probate attorney. He also lectured on oil and gas in the extension division of the University of Oklahoma.

At the annual meeting of directors, a unanimous vote of appreciation and confidence was extended to Henry G. Hunt, executive secretary, for the administration and savings the past three years.

At the meeting, Hunt announced that the State Board of Tax Administration had formally adopted a resolution exempting all drilling equipment and supplies from the state 3 percent sales tax. Under the ruling all drilling and producing equipment is exempt from the tax. Transportation (pipe lines) company equipment is not exempt under the board's ruling that transportation companies do not represent a part of industrial processing.

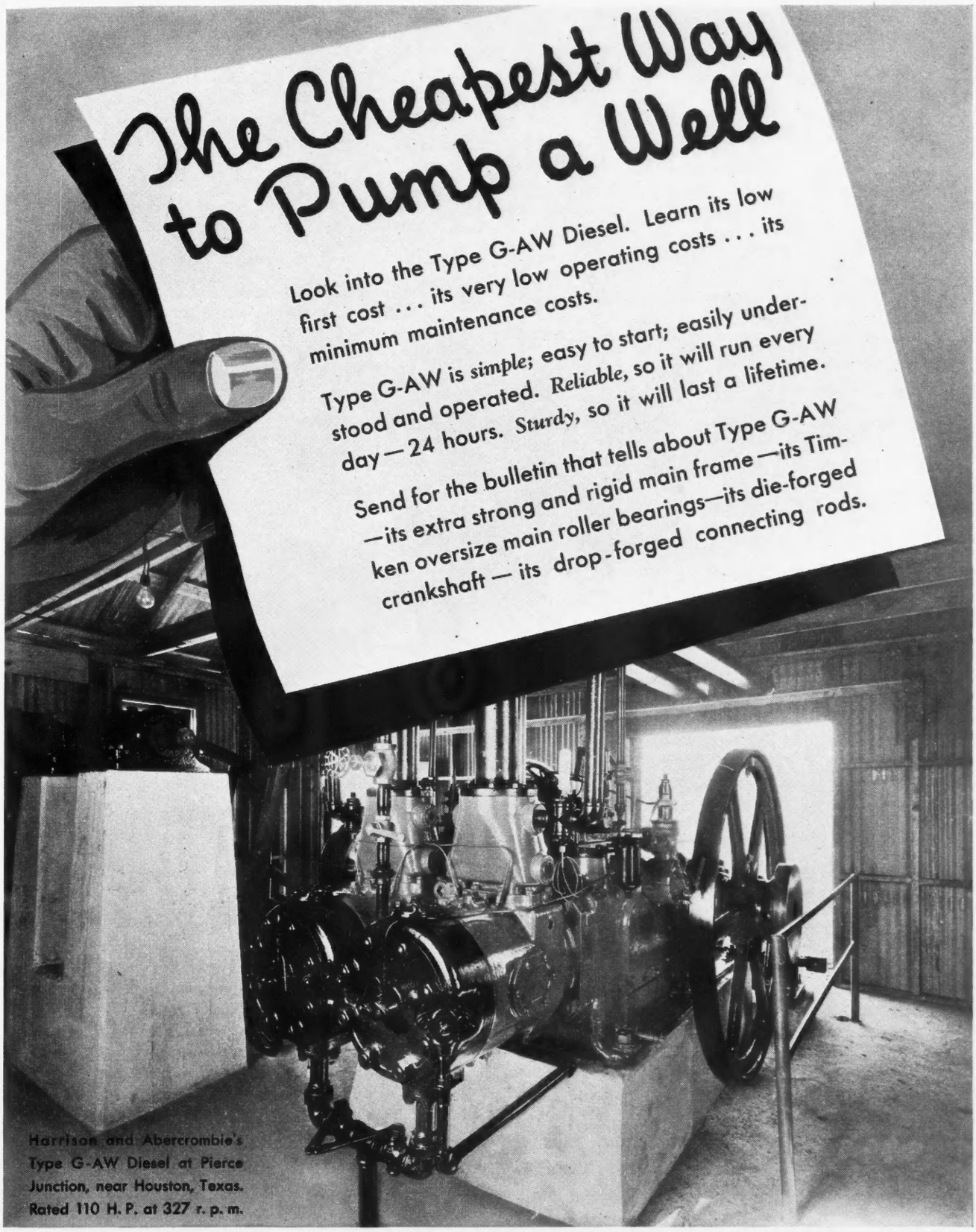
Floyd C. Calvert, left, newly elected president of the Oil and Gas Association of Michigan, talking things over with Howard D. Atha, right, who retires after four consecutive years as the organization's head.

TOM F. STIPP, geologist, who served as resident geologist for some time for Associated Oil Company at Coalinga, and later was in Mexico for the Cities Service Company, is now connected with the United States Geological Survey, with headquarters at Casper, Wyoming. Prior to going to Casper, Stipp was in charge of the state land office at Huntington Beach, having mostly to do with oil operations.

ARTHUR S. KLEEMAN, president of Oils & Industries, Inc., New York investment banking house interested in financing Texas independent oil operators, is expected to visit Houston January 9 and 10.

CAPTAIN T. RIEBER, chairman of the board of The Texas Corporation; W. S. S. Rodgers, president of the company; and James A. Moffett, chairman of the board of California-Texas Oil Company, Ltd., all from New York, were Houston visitors during the holidays. They were making an inspection of properties held by The Texas Company. The California-Texas Oil Company, Ltd., is a jointly owned subsidiary of The Texas Company and Standard Oil Company of California, and operates in the Far East and other foreign countries.

A. J. O'ROURKE, now district manager for the land department in West Texas-New Mexico district for Skelly Oil Company, will be transferred to the same position in the Kansas district with headquarters in Wichita, succeeding Don Hill, who has come to Tulsa as assistant manager. Other changes which are to take place as a result of O'Rourke's promotion are as follows: James FitzGerald, Jr., now district geologist in the West Texas-New Mexico district, will be transferred to the land department and stationed at Midland, Texas; Dana M. Secor, now district geologist in the Panhandle district, will become geologist replacing FitzGerald; Willard F. Bailey, in Midland at present, will replace Secor in the


The Cheapest Way to Pump a Well
Look into the Type G-AW Diesel. Learn its low first cost ... its very low operating costs ... its minimum maintenance costs.
Type G-AW is simple; easy to start; easily understood and operated. Reliable, so it will run every day—24 hours. Sturdy, so it will last a lifetime.
Send for the bulletin that tells about Type G-AW —its extra strong and rigid main frame—its Timken oversize main roller bearings—its die-forged crankshaft— its drop-forged connecting rods.

Harrison and Abercrombie's Type G-AW Diesel at Pierce Junction, near Houston, Texas. Rated 110 H. P. at 327 r. p. m.

THE COOPER-BESSEMER CORPORATION

Mt Vernon, Ohio — PLANTS — Grove City, Pennsylvania

25 West 43rd Street, New York City
Mills Building, Washington, D. C.
640 East 61st Street, Los Angeles, Calif.
201 East 1st Street, Tulsa, Oklahoma
631 Spring Street, Shreveport, La.
Magnolia Building, Dallas, Texas
53 Duncan Street, Gloucester, Mass.
Esperson Building, Houston, Texas

Panhandle, and W. C. Fritz, paleontologist and geologist at Midland will be production geologist in the West Texas-New Mexico district under Secor.

K. R. TEIS, of E. H. Moore, Inc., is at St. Johns hospital in Tulsa recovering from injuries sustained in an automobile accident which occurred December 26. Attending physicians report his condition as satisfactory.

S. D. HUNT, formerly purchasing agent for the Moorlane Company, has been made assistant sales manager under Egan Koehler, vice president and sales manager. Dwight H. Bowman is the new purchasing agent for the firm succeeding Hunt.

WILLIAM CHAPMAN, district manager for Bethlehem Steel Corporation at St. Louis, Mo., moved his offices to Tulsa on January 1, 1937.

DR. W. G. WOOLNOUGH of Canberra, F.C.T., Australia, geological advisor to the commonwealth government, recently returned home from a series of extended field tours in northern and western parts of Australia, having been absent from his office for six months. He left Canberra January 1 to attend the Science Congress in New Zealand. Dr. Woolnough is president of the Geology Section of the Australian and New Zealand Association for the Advancement of Science.

CHARLIE H. DUFF, superintendent for Blanco Oil Company in the Greta district, has resigned to join the sales staff of Hercules Supply Company, Fort Worth, and will have charge of the company's store at Corpus Christi. He is well known in oil field equipment circles in Texas, Louisiana and Mexico, having worked 13 years for Oil Well Supply Company prior to entering the production branch of the industry with the Moody-Seagraves Interests in Southwest Texas.

NAME PERSONNEL
Transwestern Company executives are named

Oklahoma City.—Personnel of the executive family of the new Transwestern Oil Company, which was formed to take over properties of Slick-Urschel Oil Company, has been completed. Wesley G. Gish, Fort Worth, who has been in charge of land and exploration work for Sinclair Prairie Oil Company in West Texas and New Mexico (The Oil Weekly, December 28), is vice president. Orba Greenwood has been elected treasurer, and George W. Grant general counsel and secretary.

These new officials are members of the board of directors, which also includes Arthur Seeligson, president; Mr. and Mrs. Charles Urschel, E. DeGolyer and J. M. Hewgley.

Hewgley, who was identified with Slick interests over a long period, is vice president in charge of production. James K. Ellis, who has been with Carter Oil Company as district superintendent, will be assistant in the production department.

DORSEY HAGER, consulting geologist and engineer of Houston, is making a trip to Mount Pleasant, Michigan. He will return around January 4 or 5.

R. V. WHETSEL, general manager of Compania de Gas y Combustible "Imperio" S. A., a Cities Service Company subsidiary at Tampico, Mexico, is spending the holiday season in New York.

LYON F. TERRY, has recently resigned as vice president of Ralph E. Davis, Inc., petroleum and natural gas engineers of Pittsburgh and New York, and joined the staff of Chase National Bank, New York, in its department of petroleum economics, under the direction of Dr. Joseph E. Pogue.

C. W. CLAYTON, field foreman of Mexican Gulf Oil Company in the Altamira district, Mexico, has returned to his duties after a vacation in Illinois and Missouri.

DR. B. B. WEATHERBY, vice president and general manager of Geophysical Research Corporation, will address the Tulsa Geological Society, January 4, on "A Balanced Geological Department."

EASTERN DISTRICT
A. P. I. Production Meet dates changed

NEW YORK.

ANNOUNCEMENT has been made that the annual meeting of the Eastern District of the American Petroleum Institute's Division of Production will be held May 6 and 7, 1937, in the Deshler-Wallick Hotel at Columbus, Ohio, and not June 3 and 4, as originally planned.

The change was necessitated, according to District Chairman J. C. Askam of The Ohio Oil Company, Findlay, Ohio, by the fact that the Institute's 1937 mid-year meeting will be held June 1 to 3 at Colorado Springs, Colorado, instead of during early May at Tulsa, as has been customary.

Announcement has been made of the appointment of committees for the meeting by District Chairman Askam, as follows:

Program committee: Chairman Georgel Wittmer III, Wittmer Oil Company, Pittsburgh; J. J. Schmidt, East Ohio Gas Company, Cleveland; and F. E. Eckert, Hanley & Bird, Bradford, Pennsylvania.

Arrangement committee: D. T. Ring, The Ohio Fuel Gas Company, Columbus.

Publicity committee: H. J. Lowe, The Pure Oil Company, Newark, Ohio.

Registration committee: Christy Payne, Jr., Peoples Natural Gas Company, Pittsburgh.

Membership committee: Chairman H. D. Atha, The Gordon Oil Company, Mount Pleasant, Michigan; George Meyers, Sun Oil Company, Toledo; E. H. Tollefson, Hope Construction & Refining Company, Clarksburg, West Virginia; C. D. Hunter, Kentucky-West Virginia Gas Company, Ashland, Kentucky; and John A. Thompson, Belmont-Quadrangle Drilling Company, Bradford.

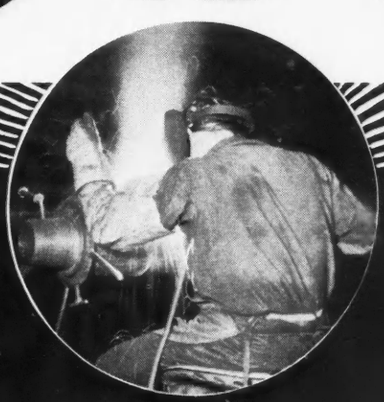
Wallace Trevor Holliday, president of Standard Oil Company of Ohio, has been elected president of the trustees of the Great Lakes Exposition, which opens May 29 for a 101-day run at Cleveland. Holliday was born March 10, 1884, and commenced law practice in Cleveland in 1908. He was associated with Standard Oil interests early in his business career and became general counsel for Standard Oil Company of Ohio in 1917. He became president in 1928.

DAN F. McCARTY, 66, executive secretary of the National Rig Builders of America, died December 27 after an extended illness in a Tulsa hospital. Born at Worcester, Mass., McCarty came to Missouri and settled at Joplin in 1912, where he became a lead and zinc producer. Later he entered the oil refinery business. During the oil boom days of 1916-17-18, he served as warehouseman for The Empire Companies at Oil Hill, Kansas, and later was associated with a rig and reel company in Tulsa.

LEWIS A. FRANCIS, 31, an employe of Sinclair Prairie Oil Company in Tulsa, was killed late December 21 when his car plunged over an embankment near Mena, Arkansas. Francis and a friend, Hubert Douglas of Muskogee, were on a hunting trip when the accident occurred. An accountant with the company, Francis came to Tulsa from Stillwater in 1920, where he was assistant to the general manager of J. A. Hull Company, and joined Sinclair Prairie when it absorbed the Hull company early last spring. He is survived by his wife, a four-year-old daughter and his parents, all of Tulsa.

DARCY T. SMART, 27, an accountant with Phillips Petroleum Company at Bartlesville, died December 28 as a result of a shotgun wound suffered while on a hunting trip with a friend, Jim Wright. Smart had been an employe of Phillips for the past six years. He is survived by his widow.

TOOL JOINTS
MILL WELDED TO DRILL PIPE



Mill Application and Welding insure correct assembly of precisely manufactured Alloy Tool Joints and Drill Pipe.

National Tool Joints properly applied and welded to the pipe have rendered exceptional field service.

THE NATIONAL SUPPLY COMPANY OF DELAWARE

National

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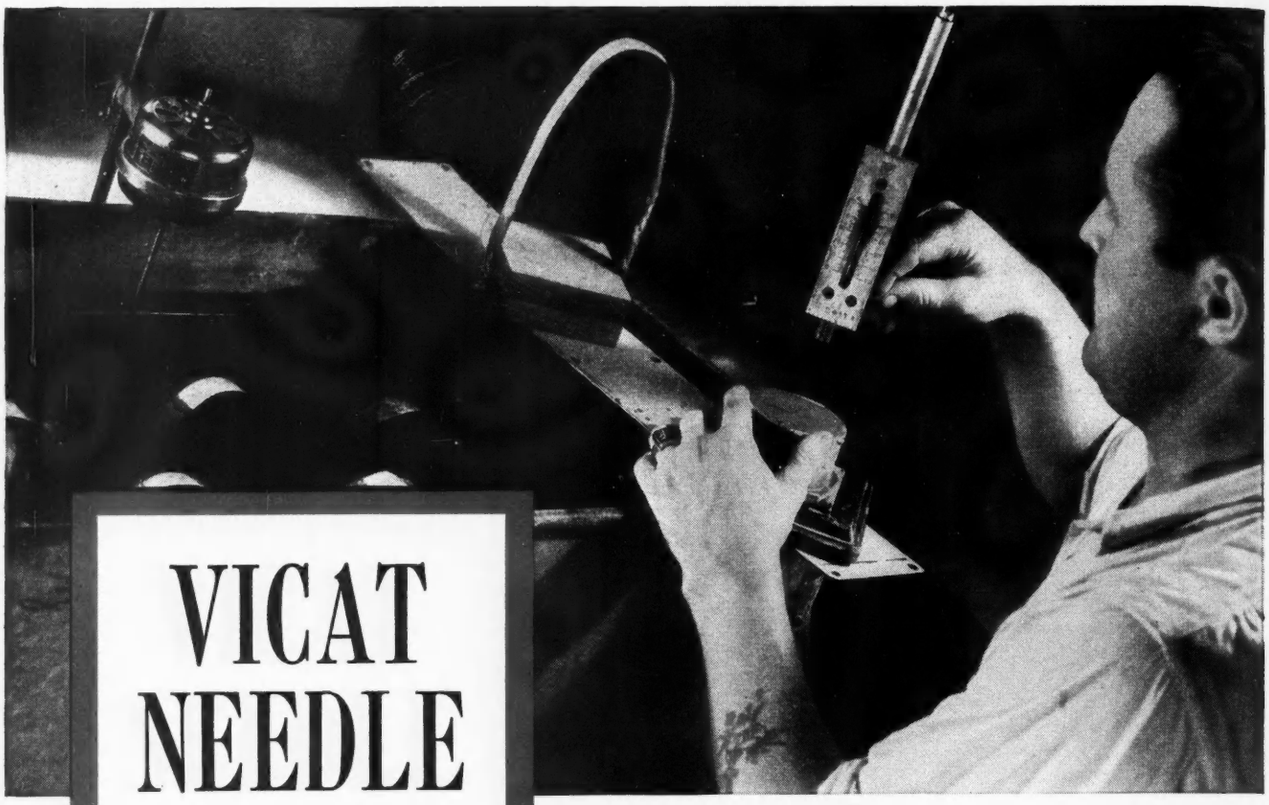

VICAT NEEDLE TEST

Shows 'Starcor' Sets Slowly at High Temperatures

FIRST step in perfecting 'Starcor' was to find out precisely what kind of a cement oil men wanted. Cement tests used by oil producers provided part of the answer. Example:

One large producer measures stiffening of cement paste stored in hot water, by means of a standard Vicat needle used to test cement setting-time at normal temperatures.

Pumpability Test

In this test (see above), the slurry sample is put into a rubber ring, placed on a pallet, and immersed in water which is maintained at the desired temperature. At frequent intervals the needle's penetration into the paste is measured. When the needle doesn't penetrate all the way through the specimen (5 mm. from the bottom), the limit of pumpability has been reached, according to this test. Oil company specifies that this 5 mm. penetration shall not be reached in a 16-lb. slurry in less than 60 minutes, at a temperature of 194° F.

An Oil Man's Cement

This is one of the Oil Man's tests that 'Starcor' was made to meet—one of the tests regularly applied to 'Starcor' as it is made and before it is shipped—your assurance of outstanding performance even in deep wells at high temperatures.

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OPERATORS CAN CONTRIBUTE MUCH TO

Successful Cementing Jobs

BY COOPERATING WITH CEMENT FIRM

By BRAD MILLS, Associate Editor

Many cement failures now attributed to the quality of the material or the services of the cementing firm are actually the result of errors in judgment on the part of oil companies, and could be overcome by proper conditioning of the hole and fuller co-operation between individuals in charge for the different concerns.

THE success of the average cementing job usually depends on the cooperation of the oil operator with the cementing company. Many failures should be attributed to carelessness, eagerness, or poor judgment on the part of the well owner, and not to the poor quality of the cement nor to the carelessness of the cementing company. Other types of failures, however, are virtually "acts of God" and usually are passed off as unavoidable.

Due to the very nature of cementing operations, it is difficult to trace the course of cement after it passes the casing shoe. The remoteness of operations and the necessity for working in the dark offer a severe handicap to the cementing company, but failures are surprisingly few when all factors are considered.

The operator can sharply increase the chances for a successful cementing job by giving attention to the little details that aid the cementing company. By having the hole in good condition, the mud at the correct weight, and the surface connections in order and equal to the task, the well owner may reasonably expect a successful cement job under normal or unusual conditions.

Definite Causes for Failures

There are always definite causes for failure, but it may not be an easy matter to determine these causes. In a number of fields failures have been eliminated by correcting the trouble that was suspected as the cause for failure. The first attempt at correction has not always removed the trouble, indicating that the first diagnosis may not strike at the seat of the difficulty.

As the average completion depth increases, pressures increase accordingly. It does not follow that cementing difficulties parallel the depth and pressure increases, however. It is easier to cement the average 8000-foot well of today than the 5000-foot well of 10 years ago. Cementing technique has more than kept pace with completion depths, just as drilling practices have been improved to meet conditions that were definite barriers a few years ago.

The nature of the formation between the bottom of the hole and the highest point at which the cement is expected to fill behind the casing must be considered. Cement will not bond satisfactory to true clays and shales, and many unsatisfactory shutoffs should be charged to this deficiency. It is not a fault of the cement that it will not bond to certain clays and shales. Since a strong packing action is needed to offset a definite bond, it may be necessary to use more than the calculated amount of cement to effect a satisfactory shutoff. Where the cement has bonded well to the casing and has tightly filled all space between the hole and the casing, the treachery usually accompanying a clay or shale wall may be overcome.

Contamination Serious Problem

Contamination of cement is a serious problem. Cement used should possess a quality that prevents or at least checks ordinary contamination with drilling mud. A gel type cement is recommended by many operators for resisting contamination. The need for a mechanical means to prevent contamination is pressing.

An oil well should be considered a semi-permanent investment, and the objective in a cementing job should be a water shutoff that can give no future

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trouble. Use of ample cement and the exercise of special care should be the means of accomplishing this objective. Haphazard preparations for cementing during intensive drilling campaigns in competitive fields have led to serious water trouble after a short but satisfactory production period.

Sulphate waters eventually disintegrate cement the magnesium sulphates being the most destructive. This is the one natural force that will affect cement in its usual line of service. The length of service rendered by cement in a sulphate water area depends on the strength of the water. The presence of such water does not always prevent securing a temporary water shutoff.

Pipe Should Be Centered

A major operator in South Louisiana has given considerable study to the importance of centering the pipe in the hole, during cementing operations. The cement obviously tends to follow the upward course of least resistance behind the casing string. Where the hole is crooked, or the pipe otherwise lies against the side of the hole, the cement cannot make a full or uniform ring around the casing. This unbalanced condition may give immediate or future trouble. Cementing companies have developed mechanical methods for giving the greatest possible uniformity of distribution of cement, but the operator can help to assure a successful cementing job by reaming the hole and otherwise placing it in condition.

The rush of cement upward along the side of the hole that offers full or excess clearance is indicated by subsequent gun perforating to test formations that lie back of the ring of cement. One company recently perforated a casing string and found that the cement had not found its way behind sections of the casing that apparently lay against the side of the hole. The cement column was far from uniform between the casing and the hole, and at one shooting point there seemed to be little or no cement. Water trouble accompanying the flow of oil through the gun perforations was attributed to this lack of uniformity. This experience placed added emphasis on the importance of centering the pipe in the hole, or reaming the hole to assure a full ring of cement around the casing.

Use of More Cement Helps

A large producing company experienced considerable difficulty in obtaining a water shutoff in a Gulf Coast field. The exact amount of cement that should have filled the hole to the required level outside the casing was used during the cementing operations that proved faulty. The quantity of cement was exactly doubled and the trouble was corrected. Every subsequent cementing job was a success. It is impossible to calculate the amount of cement that will fill the space between the casing and the hole to the desired level. Many caverns and irregularities may exist, and in actual practice the calculated amount of cement may be less than half the required amount. Many oil companies use half the cement that should be used, due to the greater cost involved in doubling the amount.

Cementing companies often are forced to share the blame for such failures. Even an excess is much better than the smallest amount that will give a shutoff. The cementing of 9⅝-inch casing strings in South Louisiana resulted in a number of failures around 5000 feet, but doubling the quantity corrected the trouble. Subsequent surveys indicated that the space between the casing and the hole was much greater than calculated originally.

In many holes the mud left on the wall is enough to contaminate the outer fringe of the cement ring around the pipe unless a surplus quantity of cement is used. This slight contamination often prevents obtaining a bond with the wall of the hole, several operators believe. Reaming or washing would eliminate most of this trouble.

The use of excess cement gives a scavenging agent that is very effective in cleaning the wall of the hole ahead of the main body of cement. Tests have shown that the first cement pushed upward behind the pipe actually cleans all objectionable mud from the lower section of the hole. It is too much to expect a small amount of cement to clean the hole and effect a satisfactory shutoff at the same time. A liberal follow-up of good clean cement is a requirement.

Air May Cause Trouble

A well known drilling superintendent holds to the claim that air in the column during cementing operations often causes trouble. Most of this trouble, however, may be eliminated by the use of a special plug head that does not permit entry of air into the column between the last cement run and the mud that follows. This special head was perfected by a cementing company.

Air in the column originally came about in a form of vapor lock that supposedly air-cut and contaminated the last cement run. The accumulation of air took place between the cement slurry and the follow-up plug that separated the mud from the cement. During the pumping-in operation, the cement, being much heavier than the mud ahead, crowded downward faster than the plug that followed it. This created a void that eventually became filled with the trapped air that entered the column when the line was opened to insert the top plug, according to the theory held by many operators. This air on top of the last cement run aerated the top of the cement column and affected its consistency, according to operators who found the last cement soft and channel-cut after the usual setting time had elapsed. Cementing companies do not believe that air can give serious trouble.

The use of a special plug head has eliminated most of the objection to air in the cement column. This head simply rests above the point of entry of the cement, and after the cement has been run the plug is dropped on top of the cement and is followed immediately by mud that is circulated through a top valve. The cement is pumped into the casing through a lower valve, which is closed when the required amount of cement has been pumped. This arrangement keeps the cement and mud column tight at all times and prevents the entry of air during the placing of the last plug in the line.

Moisture in Casing a Factor

Moisture on the inside of the casing is believed by many operators to be a source of contamination. The plug wipes the casing clean of objectionable mud, but the moisture on 6000 to 8000 feet of casing is believed to affect cement that has been mixed thin in the beginning.

Several operators mix the last 20 percent of the cement to give a greater weight to the portion that

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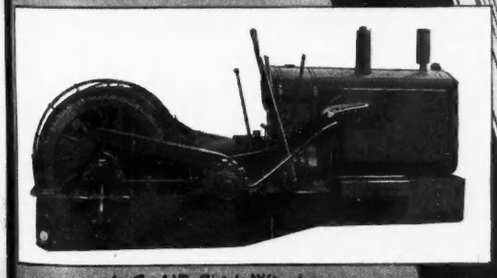
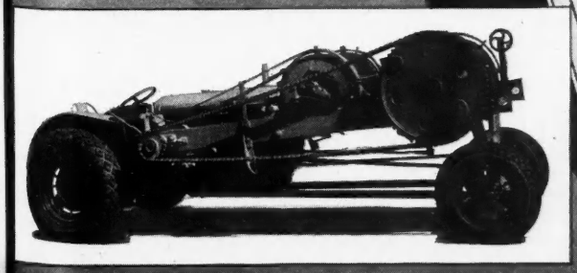


A-C, UE Skid Winch



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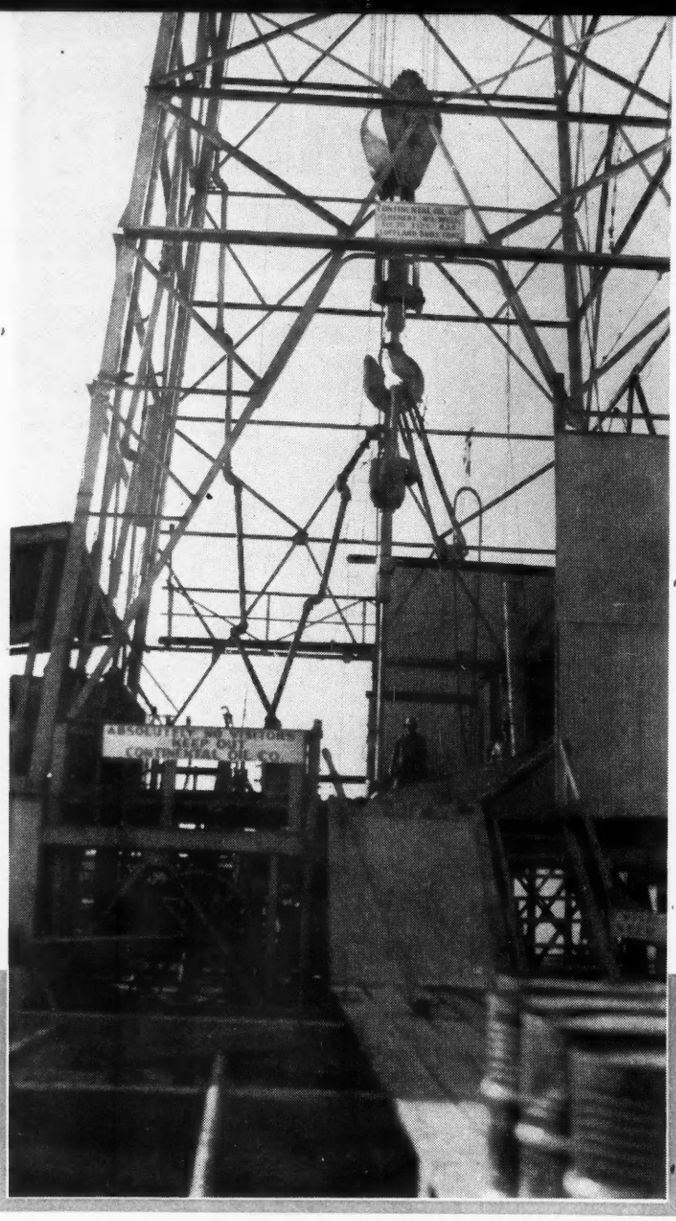


Continental Oil Company's Hebert 1, shown here as it finished drilling preparatory to landing and cementing 11,795 feet of five-inch pipe that established a new world's record for casing depths. The previous record for a solid casing string was held by a California test that set 10,813 feet of 6⅝-inch pipe.

Hebert 1 is a wildcat test in Vermilion Parish, Louisiana Gulf Coast. Its present depth is 12,216 feet, which makes it the second deepest test ever drilled, the second test to go below 12,000 feet, and the deepest active test in the world today. The record for deep drilling is 12,786 feet.

often appears soft after the usual setting time. This heavier cement tends to reduce contamination by mud, air and water.

Contamination by mud seems to be a serious problem, yet it is very difficult to determine the extent of contamination behind the casing. The cementing companies under average conditions have eliminated the greater part of this trouble.

Where two weights of pipe are used and the heavier section is on bottom, the cement plug may stick or be retarded when it reaches this heavier portion of the string. The well owner should consider this important point before attempting to cement casing. The cementing company may use exactly the correct size of plug in the lighter, upper section of the casing, only to meet trouble when the plug reaches the heavier and smaller inside diameter pipe on bottom.

Channeling Recognized Difficulty

Channeling of cement after it has passed the casing shoe is recognized as a difficulty, but its exact effect on the success or failure of a well may only be surmised. Cementing companies have perfected mechanical methods for evenly distributing the cement around the casing, but it is difficult to determine the efficacy of this distributing or whirling action a considerable distance above the casing shoe.

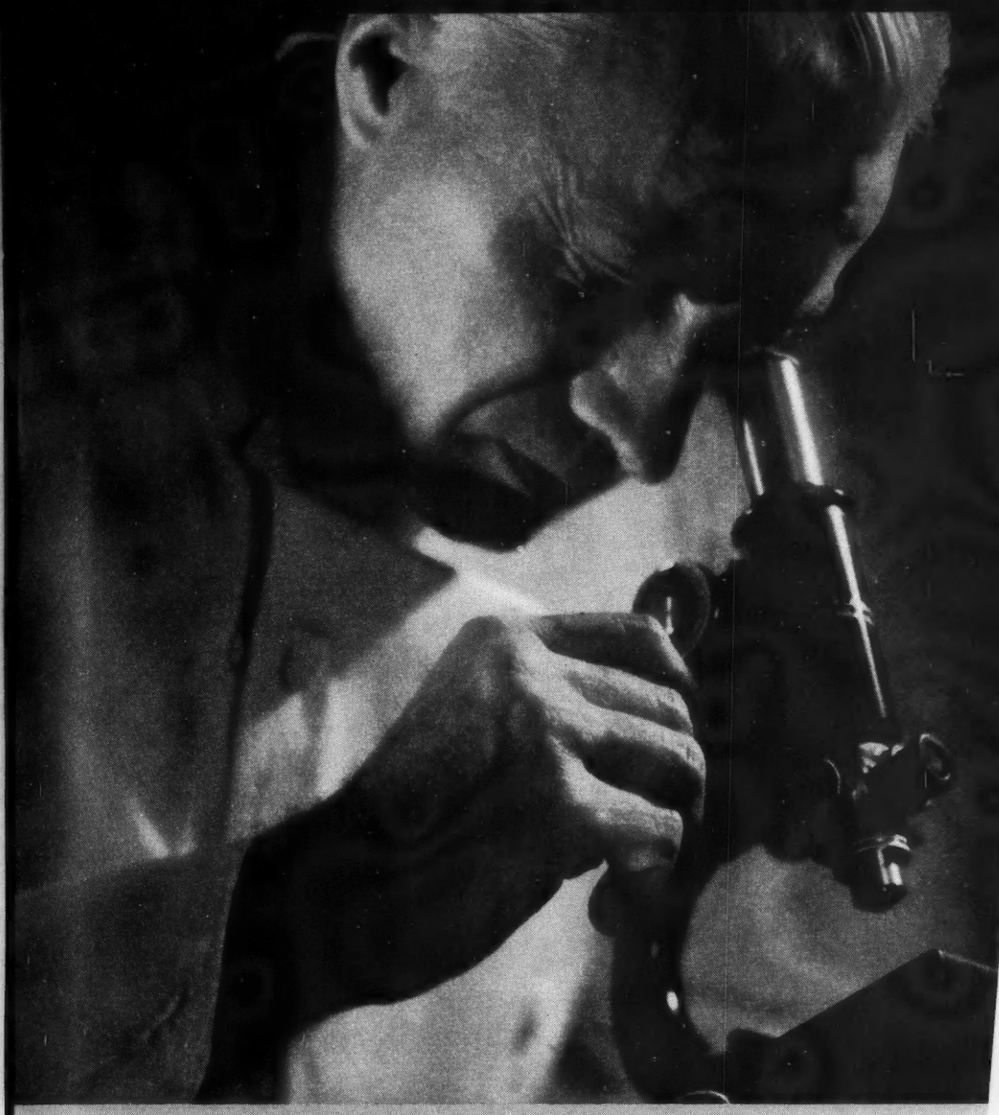
It is very doubtful if samples of cement obtained above or near the bottom of the hole are representative, due to the action of the mud on top of the cement. The mild contamination of the cement by mud causes it to remain soft. Obviously there is at least a slight intermingling of cement and mud at the point of contact.

The well owner should use a type of cement best suited to his particular needs. In deep or difficult jobs, considerable thought should be given to the characteristics of the cement used. Cement that might prove satisfactory for shallow casing or plug-back jobs would not necessarily meet more difficult requirements.

Temperature of the hole and other hazards should be considered by the operator before starting cementing operations. A good pumpable cement should be used, and the possibility of premature setting should be studied. The extremely deep drilling of today often calls for unusual grades of cement.

The actual cementing burden falls on the cementing company. Through a long range of experience the company usually is able to counsel with the well owner or drilling contractor to advantage.

The oil company can facilitate cementing operations by considering requirements ahead of actual work. By placing water and steam connections at the proper locations and considering the need for mud lines the well owner can save time and expense that will be incurred if carelessness has been a factor.



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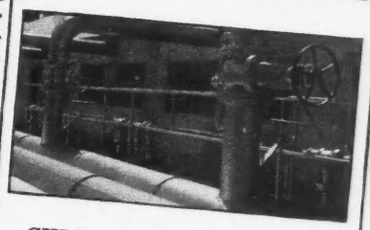

CHICAGO, ILL., Dec. 21—High temperatures, high pressures, corrosion and erosion are the "Big Four" enemies of production and refinery engineers in regulating the flow of liquids and gases.

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ADDITIONAL RESEARCH INTO

Petroleum Emulsions

SHOULD PROVE PROFITABLE

By MICHAEL J. LEAHY,
Consulting Engineer, Fort Worth, Texas

PETROLEUM emulsions are either a blessing or a curse to the oil man. A large number of emulsions are made in which petroleum forms a major portion thereof, and such emulsions are beneficial in numerous ways; but especially so to the oil marketer in that sales outlets thus are provided for a wide variety of petroleum fractions for which there would otherwise be but slight demand. On the other side of the picture is depicted the ever-present problem every producer of crude oil has to meet; and that is the recovery of pipe line oil from oil field emulsions. With the hope that it will be of value to these producers, an outline of this problem together with suggestions for its solution will be given first. A brief summary of the types of beneficial emulsions of petroleum will then be given.

Oil-Field Emulsions

Petroleum oil in underground strata frequently is in close contact with water in such strata. Such water generally contains varying amounts of salts in solution and frequently also contains water-insoluble particles in suspension. Further than this, in the Mid-Continent, Gulf Coast and California oil fields the crude itself contains asphalt and asphaltic tars.

The theory generally accepted that tends to explain the formation of emulsions may be stated briefly. When extremely fine particles of one substance are dispersed in a liquid the resulting mixture is called a colloid. Colloids may be divided into two broad groups. Such colloids as have an affinity for water and which may be dispersed completely therein are called emulsoids or hydrophiles. Examples of hydrophilic colloids are: glue, starch, sodium or ammonium soaps, etc. Colloids that are not dispersed readily in water but which are easily dispersed in liquids other than water are called hydrophobes. Examples of hydrophobic colloids are: egg yolk, asphalt, coal tars, gas carbon, insoluble calcium salts, etc. Emulsions are mechanical mixtures of two or more liquids that are ordinarily immiscible and such emulsions can be formed only in the presence of a suitable colloid. The most common types of emulsions are formed from oil and water. If a hydrophilic colloid is present in the water, an emulsion formed from such water with oil is normally of the oil-in-water type in which the droplets of oil are coated individually with extremely thin films of water. Examples of this type of emulsion are: pigmented paints and varnishes, butter, margarine, fresh milk, medicinal salves, etc. However, if a hydrophobic colloid is present in either the oil or the water, an emulsion therefrom formed is generally of the water-in-oil type in which tiny droplets of water are coated with very thin films of oil. Practically all oil field emulsions are of the water-in-oil type.

Breaking Emulsions

Keeping in mind the fundamental facts that emulsions are formed only in the presence of colloids; that water-in-oil emulsions are formed most readily in the presence of hydrophobic colloids and oil-in-water emulsions in the presence of hydrophilic colloids; and that the film of oil enclosing the minute droplets of water in water-in-oil emulsions is very tenacious; the problem of breaking water-in-oil emulsions resolves itself into the removal or decomposition of the hydrophobic colloids therein or the rupturing of the oil films surrounding the water droplets and thereby permit the coalescing of such droplets into drops which may settle by gravity from the oil.

In cases where the hydrophobic colloid present in the oil field emulsion is asphalt, such asphalt may be removed by means of chemicals which have a strong preferential solvent action on asphaltic compounds. Parenthetically, it has been found that any of those compounds that are used successfully for the solvent refining of lubricating oil also serve to break water-in-oil emulsions in which asphalt is the emulsifying agent. However, as a rule the cost of using solvent-refining chemicals for breaking oil field emulsions is prohibitive in that relatively large proportions of such chemicals dissolve in the treated oil or in the water and sludge separated therefrom. Chemicals which actually react with asphaltic compounds in emulsions are not used because of the fact that such chemicals either react with the treated oil also or else with the water present to form compounds that are detrimental to the quality of the oil or that corrode the pipe lines or tanks containing the treated oil.

Due to the fact that in nearly every instance an oil field emulsion contains not only asphalt but other hydrophobic colloids as well, the problem of breaking such emulsions must be attacked from an angle other than that of removing the asphalt from the crude oil. The attack therefore settles on the rupturing of the oil film encasing the individual water

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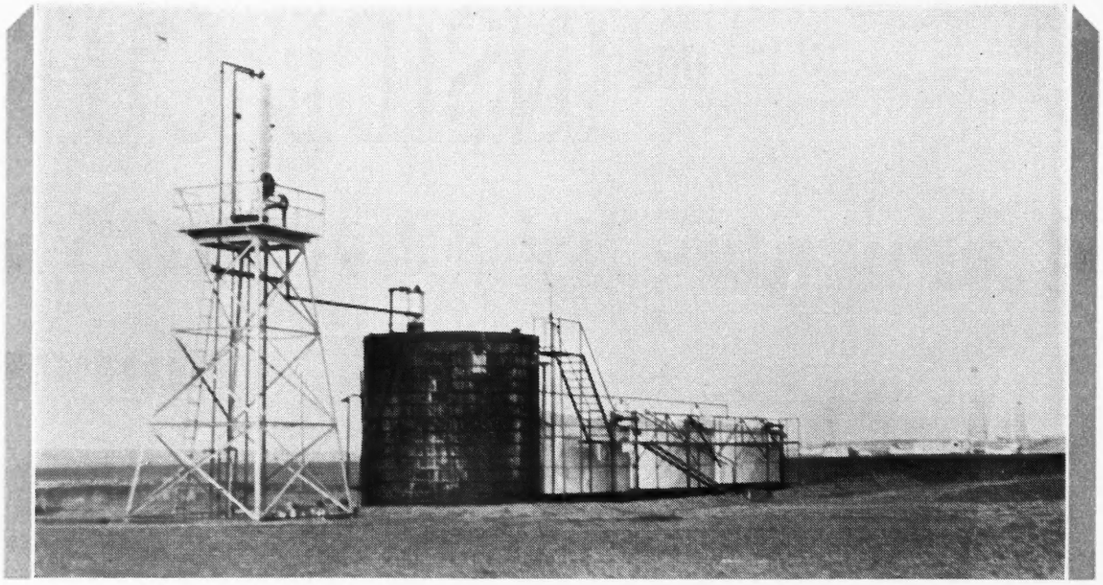


A tank battery in the Hilger field of Reno County, Kansas, where heavy water production accompanies the oil yield. Emulsions are largely eliminated by treating in the larger wooden unit.

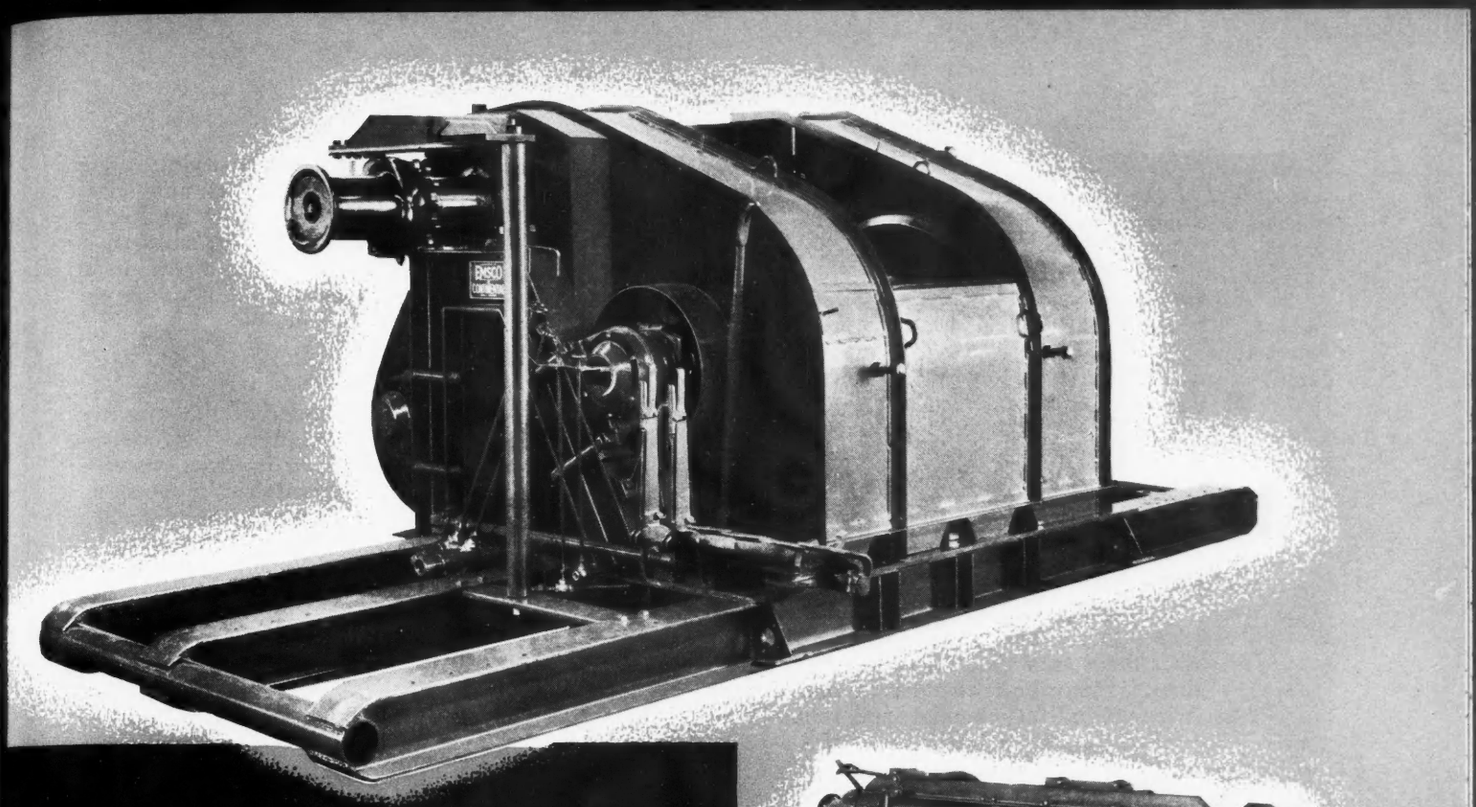
droplets. Oil films may be broken in numerous ways. The emulsion may be heated sufficiently to cause the water droplets to expand and thereby reduce the surface tension of the oil to such an extent that the oil films will break and thus permit the water to coalesce and settle. This is the oldest known method of breaking oil field emulsions. The emulsion may be agitated with copious quantities of pure water. This method operates successfully only on those types of emulsions in which the hydrophobic colloid present is partially soluble in pure water; thus permitting the washing out of the colloid itself from the emulsion.

In cases where the water present in the oil field emulsion contains electrolytes in solution, it is possible to break such an emulsion readily by passing an electric current through the emulsion. This serves the double purpose of heating the emulsion and thereby reducing the surface tension of the oil films and of changing or neutralizing the electric charge on the film and thus reducing its power to adhere to the water droplet. Electrical dehydrators are used quite extensively for breaking oil field emulsions, especially in localities where electric power rates are low. The most obvious advantage of electrical treatment over chemical treatment of emulsions is that there is no possibility of contamination of the treated oil with harmful chemicals or residues.

If a hydrophilic colloid is introduced into an emulsion which already contains a hydrophobic colloid, the two colloids tend to oppose each other and thus the surface tension of the oil films become nil and the water droplets coalesce rapidly. In other words the added colloid tends to form an oil-in-water emulsion from the water-in-oil emulsion and thus reduces the adhesive power of the oil films therein to such an extent that the water droplets break through these films and settle by gravity from the oil, thereby breaking the emulsion completely. In order to be truly effective in breaking the emulsion the hydrophilic colloid should be readily dispersible in the emulsion itself and its rate of solution in either the oil or water should be comparatively slow. Due to the fact that glue, starch, and colloids of a like nature are not readily dispersible in an oil field emulsion, such compounds may not be used successfully for this purpose. However, sodium and ammonium soaps are true hydrophilic colloids; are readily dispersible in oil field emulsions; and their rates of solution in the oil are extremely slow. Therefore such colloids comprise the bulk of the compounds used for breaking such emulsions.

Soaps are essentially inorganic esters and may be in the solid, liquid or paste form. Only the liquid soaps are used for breaking oil field emulsions. Such soaps are normally formed by the hydrolysis and esterfication of vegetable or animal fats by means of caustic or ammonia. It has been found that if certain vegetable fats, particularly castor oil, are first sulfated with concentrated sulfuric acid and then either partially or wholly saponified with caustic or ammonia, the resulting compound is a liquid that is readily dispersible in a water-in-oil emulsion and has a very slow rate of solution in petroleum oil. Therefore such sulfo-soaps, as they are called, form the base product from which nearly all oil treating chemicals are made. To this base may be added other liquids which, in the main, tend to reduce the viscosity of the soap or render it more readily dispersible in the oil field emulsion.

In brief, the method of making a sulfo-soap from castor oil comprises mixing concentrated sulfuric acid with pure castor oil under rigid control of temperature; allowing the acid to remain in contact with the oil for a predetermined period; washing the excess acid from the sulfated oil with water or a sodium sulfate solution; and then saponifying the washed oil with an ammonia solution or a solution of caustic and ammonia. It will be noted that there are so many variable factors present that an almost unlimited number of sulfo-compounds or bases may be formed in this manner. Upon the concentration of the sulfuric acid used and the amount thereof depend the degree of sulfation of the castor oil. The



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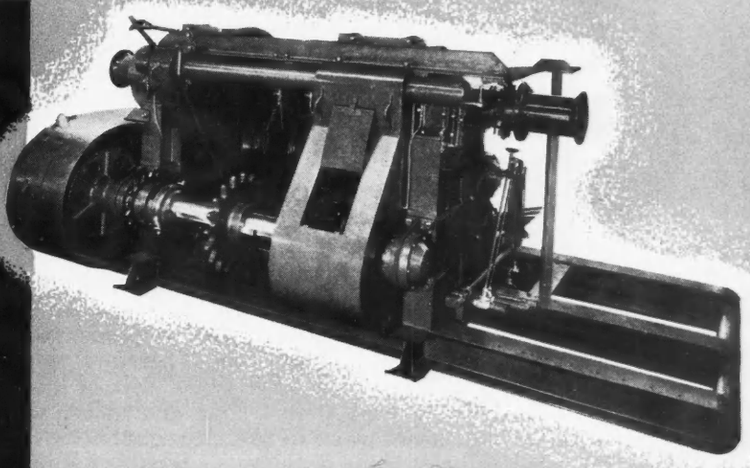

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temperature at which sulfation occurs and the time of contact of the sulfuric acid with the castor oil are variables which must be kept under rigid control in order that the reaction product may be duplicated. The amount of water used in washing the sulfated castor oil (which is insoluble in water) is a variable in that any free sulfuric acid remaining in the mixture after washing will react with the caustic or ammonia which is added later and so cause undesirable side-reactions to occur during saponification. Also the strength of the caustic or ammonia solution and the proportion thereof used are variables which determine the degree of saponification of the sulfated castor oil. The degree of saponification will likewise determine the proportion of glycerine present in the finished base. Glycerine is a by-product of saponification and is regarded generally as beneficial in emulsion-breaking compounds. When it is considered that castor oil is but one of the many vegetable or animal fats that may be sulfated and then saponified, it may be realized that the services of an experienced oil-fat chemist are required to make sulfo-soaps for use in breaking emulsions.

"Sludge acid," or the acid remaining from the acid treating of petroleum fractions is sometimes used as such or is neutralized with ammonia and then is used as a compound for breaking oil field emulsions. Also naphthenes may be sulfated and then neutralized with caustic to produce a base frequently used in the compounding of emulsion-breaking chemicals.

Other Petroleum Emulsions

There are such a great number of types of emulsions formed or produced with petroleum or its fractions as a component that it would require several pages just for the listing of them. Therefore only a few of the so-called beneficial types will be noted here. Petroleum asphalt may be emulsified with water in numerous ways to produce emulsions that are used as paint, road building material, or roofing compounds. Such emulsions may be of the water-in-oil type or the oil-in-water type; depending on the colloid that is added. Various types of steam-engine lubricants and practically all greases made from petroleum are emulsions. Nearly all the so-called dormant sprays used in horticulture are emulsions of petroleum fractions with water to which insect poisons are sometimes added. Sodium plumbite solutions used for doctor treating gasoline are in reality emulsions of oil, water and an insoluble colloid. Carbon black may be emulsified with glycerine and lubricating oil to form printing inks. Emulsions of sodium soaps with petroleum oil and small amounts of water are used to remove "hardness" from water by forming insoluble calcium soaps with the calcium compounds in such water. The oil present in the emulsion forms a protective film around the calcium soap as soon as it is formed; thus permitting such impurities to be filtered from the water. Emulsions of road oil and water are much more satisfactory for dust-laying purposes than either water or oil alone. Heavy fuel oil emulsified with a zinc chloride solution is used for preserving wood. Sewage may be clarified by emulsifying it with petroleum oil. Emulsions of heavy petroleum oil and water may be heated in the presence of a small proportion of air to form a fixed combustible gas which has a high calorific value. Most important of all from the standpoint of future reasearch is the interesting proposal to render gasoline conducting by emulsifying it with an electrolytic solution and then pass an electric current through this emulsion to precipitate the gums therein and to render any organic sulfur compounds present reactive to the electrolyte itself; thereby removing such sulfur compounds and breaking the emulsion at the same time.

Conclusions

In view of the above it is apparent that more research into the problems of making and of breaking emulsions in which petroleum, or its fractions, comprise a part thereof is not only advisable but should be profitable. For example, since the early days in the oil fields, it has been accepted as fact that the only way to determine the effectiveness of an emulsion-breaking chemical was to try out a number of such compounds on large batches of oil field emulsions at the point where such emulsions have been produced. The reason given for this inefficient and costly practice has been that a sample of such an emulsion could not be shipped any distance without at least partially breaking. This seems to be a very poor excuse when it is realized that efficient and inexpensive laboratory-size colloid mills are available and that a sample of a "broken" oil field emulsion may be fully re-emulsified simply by passing it through one of these colloid mills. In fact, samples that have been stored for several months have been completely re-emulsified as needed by the aid of a colloid mill. Therefore much time and money may be saved and more efficient use of chemicals may be had if the field men would send samples of their actual oil field emulsions in to a central laboratory where such samples may be used as needed for testing the effectiveness of the emulsion-treating chemicals being used or proposed. The research laboratories of nearly every large oil company contain one or more such colloid mills and these mills could be used for the above purpose in addition to their use in the preparation of experimental types of emulsions.

References

(Author's Note: The author has available copies or briefs of at least 126 technical articles, 37 textbooks, and 196 U. S. and foreign patents all relating to emulsions or the breaking thereof. The scope of this article does not permit inclusion of all these references; hence this bibliography is limited to those books which are considered to be most pertinent to this subject.)

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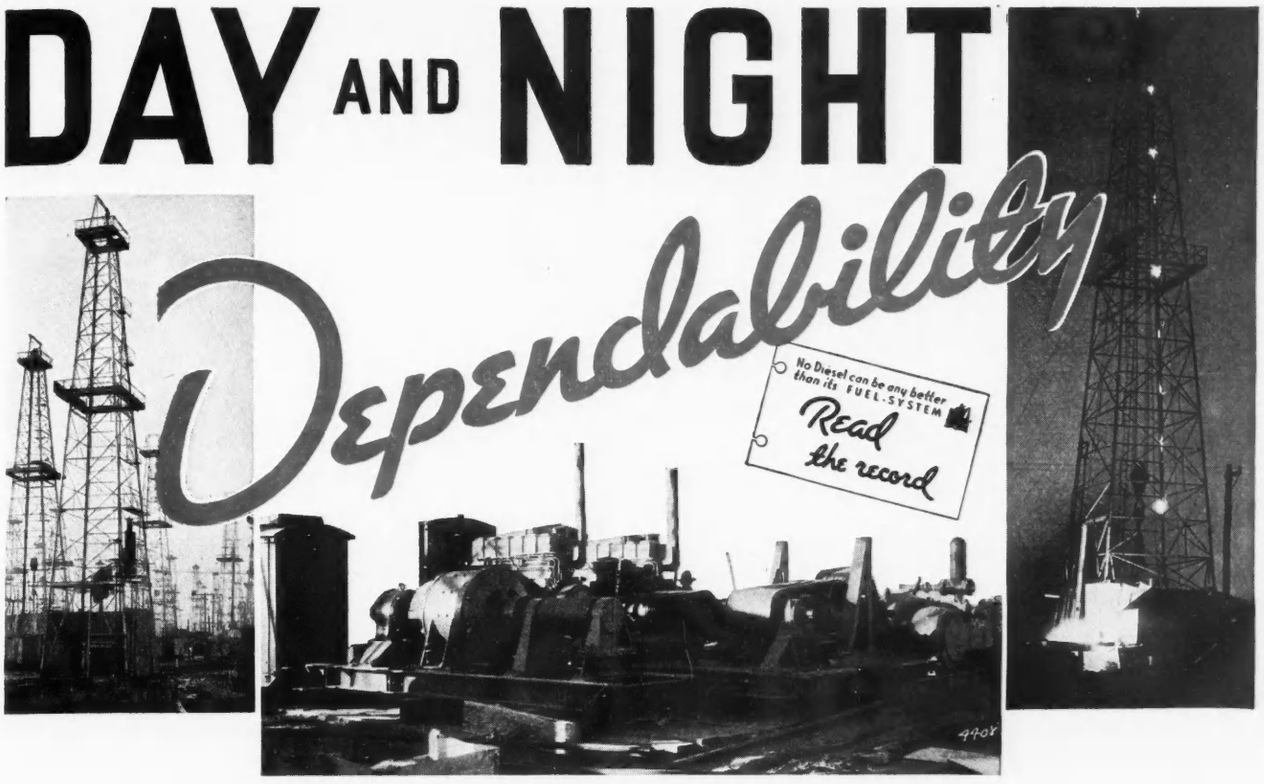
DAY AND NIGHT



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By G. M. VANDAVEER, JR.,
Engineer, E. H. Moore, Inc.

[Modern plant installed by E. H. Moore, Inc., designed so it may be enlarged with ease should the future require.]

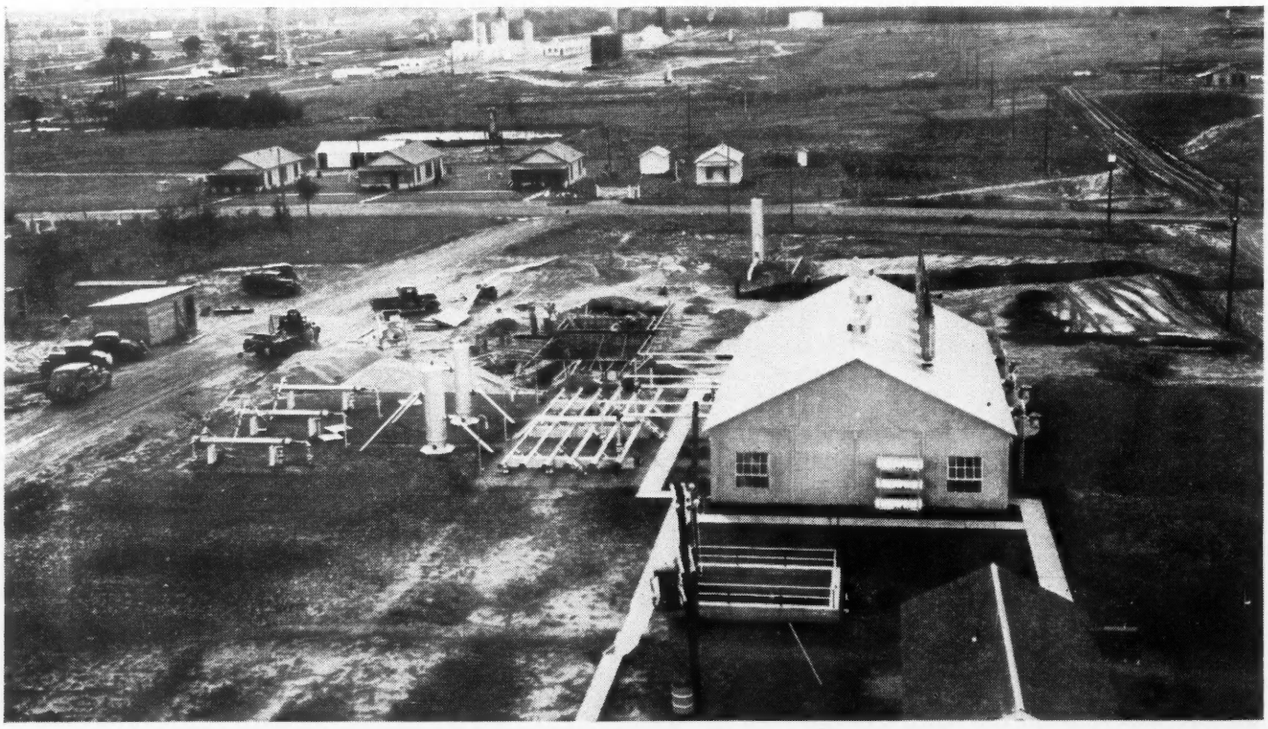
CONSTRUCTION work on an electric power-generating plant in conjunction with E. H. Moore, Inc's., natural gas compressing station in the Fitts field of Pontotoc County, Oklahoma, is nearing completion. The plant, which was started during the middle of September, has been tested and placed in preliminary operation. Already 14 wells are being pumped electrically.

The manner of engineering the new plant and compressor station has provided for additions that will allow for a maximum of 150 wells to be pumped by current generated. This figure, which may be considered ultimate although dependent upon major extensions to the producing area of the field, is an estimate of the total number of pumping units expected to be electrically powered at any one time. It may be that before some wells have reached the pumping stage, others will have been produced to depletion.

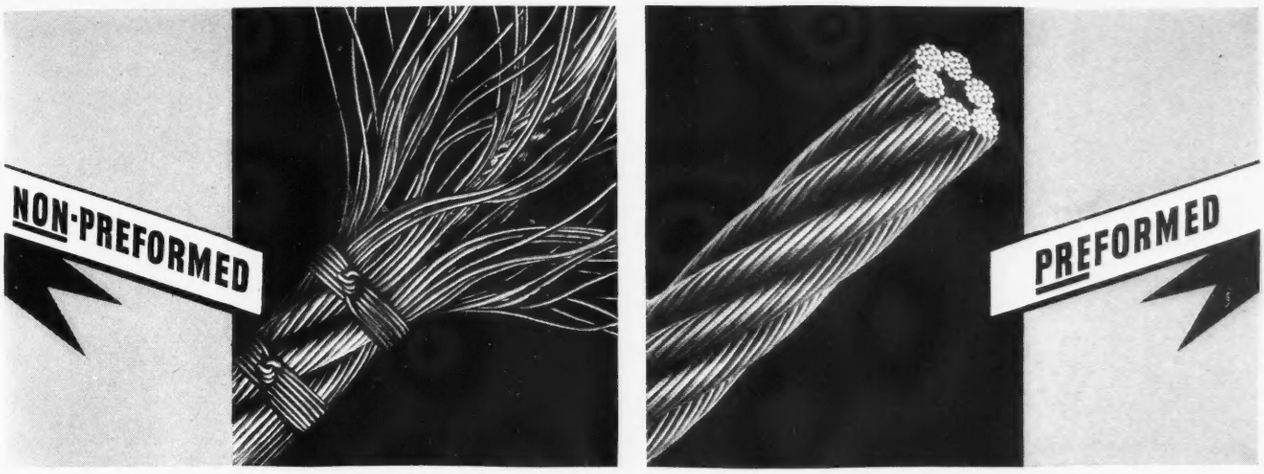
Centrally Located

The plant is located on the Craddock lease, centrally located in the producing limits of the field. Two metal buildings house the machinery, with additional equipment being necessary for the unitized compressing-generating plant. Although the primary reason for installation of the equipment was to afford power for pumping of wells, other miscellaneous field equipment and company camps will be supplied with electricity.

Three 400 - horsepower, full Diesel prime movers have been put in place and converted to natural gas as fuel. The use of this type prime mover provides for the use of gas as long as it is plentiful, and then switching to fuel oil. The three generators are of 312 Kva, 250 killowatts at .8 power factor, 4160 (4000) volt, three phase, 60 cycle type, and are direct connected. Rated at 400 horsepower at 400 revolutions per minute, the speed of the units is controlled by synchronous motor control generators. Although present operating equipment is rated at a total of 750 kilowatts, the plant has been engineered and constructed so that additional power, to the ex-



This scene was obtained from the cooling tower which is servicing both structural units. The plant in the foreground is the compressor station. Beyond, and to the left of the building, construction of the additional equipment is in progress.



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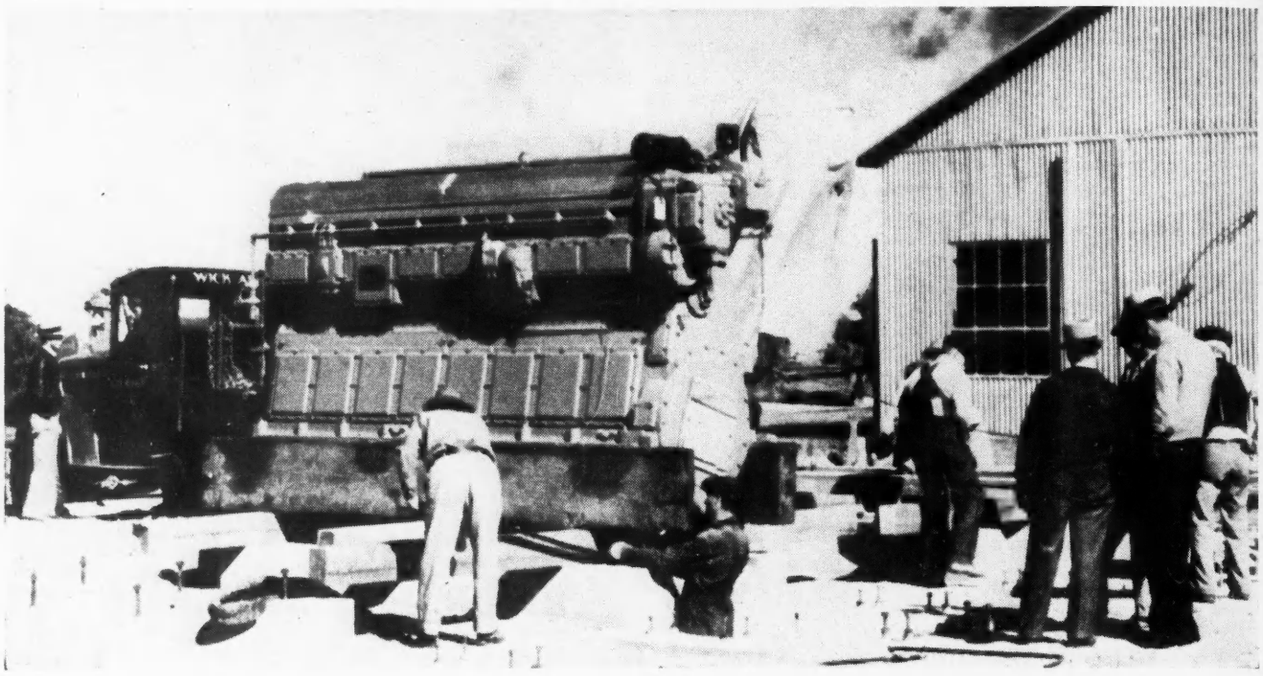


Foundation and general construction view of the electrical generating plant, showing foundations and the west end of the compressing station structure. The building to house the new equipment is separated from the compressor room only by a wall. Gas fired unit heaters and circulating fans afford conditioning in summer and winter.

tent of a total of at least 2,500 kilowatts, might be added as field demands increase the load. In this expectation necessary auxiliary equipment, such as water pumps, towers and heat exchangers, have been constructed in a ratio exceeding present requirements. Water pumps and cooling tower capacity is sufficient for an additional four similar prime drivers.

Ample Heat Exchangers

Three heat exchangers have been completed with the new unit. A 750-barrel elevated water tank and a new hot well have been constructed. Within the auxiliary building, additional oil storage space has been provided, and a pump pit has been formed to house the centrifugal water pumps. Within the main unit building, the switchboard is set nearly parallel to the wall of the structure, with necessary wiring and electrical controls recessed into an annex to the building proper. This departure from the customary arrangement, in which the switchboard and fixtures are enclosed by a protected framework within the structure, greatly increases the neat appearance of the interior. Two small air compressors, one gas driven and the other motor operated are included in the main building. Compressed air storage tanks for starting the main units are located immediately without the building.

Primary transmission equipment is of the 4,000-volt type. The station equipment will be operated from transformers mounted outside the generator building. There are approximately 6 miles of primary circuit to field leases installed. Fully treated poles have been used throughout, in lengths varying from 25 to 40 feet, depending upon the topography of the ground. Standard crossarms support the line on porcelain type insulators. Automatic circuit breakers protect the primary system at the switchboard.

One or more substations are located at each lease reducing the primary 4,000-volt power to 440 volts. Transformers for this purpose are mounted on concrete pads. From substations, the current is directly led to the electrical powered pumping equipment. The well unit motors are of 25 horsepower each, and are connected by "V" type belts to gear-driven pumping installations rated at from 40 to 50 horsepower.

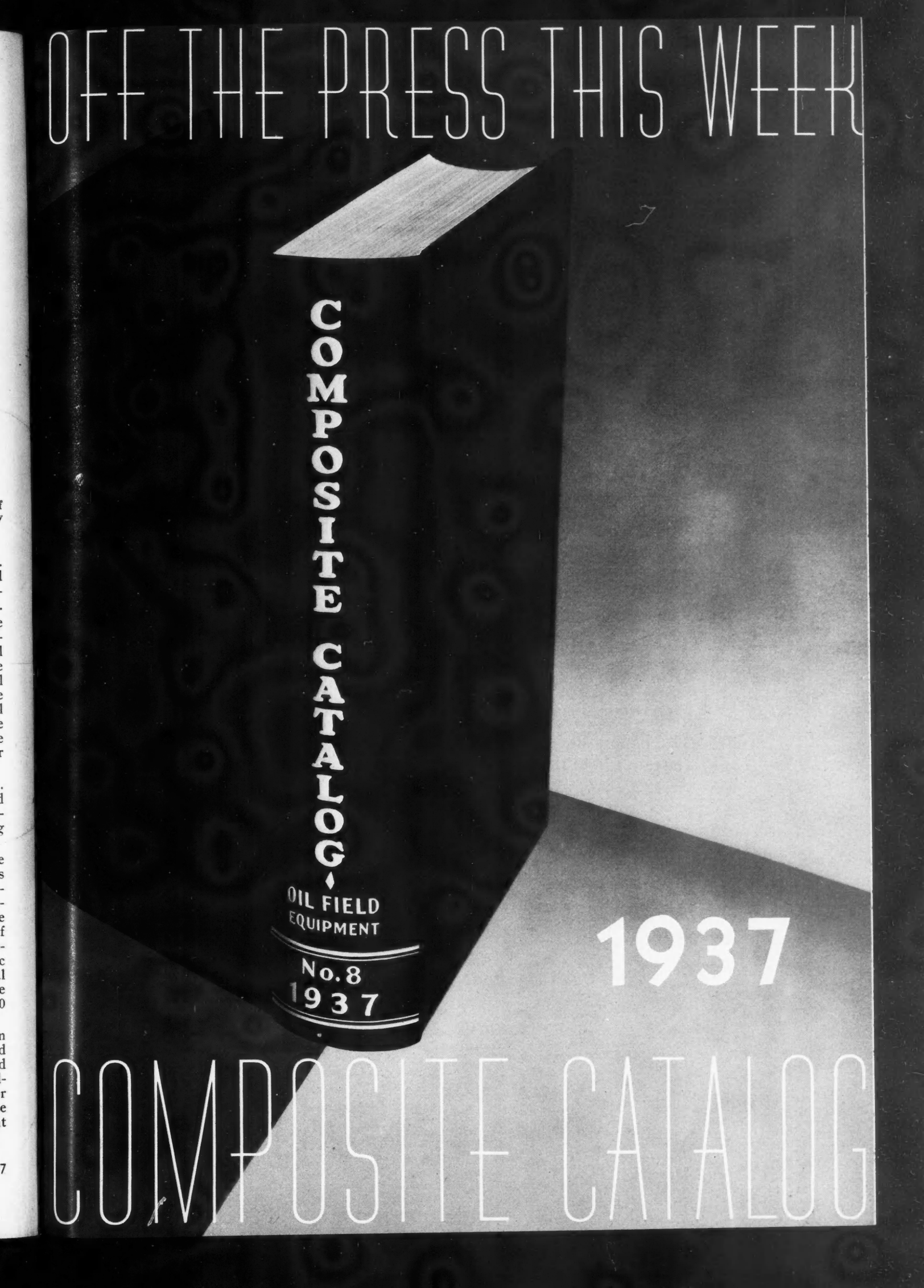
The present field equipment is sufficient for those wells which have not enough reservoir energy to produce naturally, and although the number is small compared with the general productive energy of the pool, depletion and edge locations will steadily add to the list of pumpers. Provisions have been made for extensions to the secondary system to include all wells expected to go on a pumping basis, with the exception of outside locations where it would be economically impractical to construct power lines for pumping one or two wells.

Model housing facilities constructed by E. H. Moore, Inc., for employes will be entirely electrified by the company's own power plant. Minor warehouse tools will be connected and exterior lighting services will be powered.

In addition to the new equipment installed for the generation of electric power, E. H. Moore, Inc. is adding three new compressing units to its gas station at the same site. These units are of 230 horsepower each, and are direct-connected; three-stage compressors being used. The previous capacity of the plant was 6,000,000 cubic feet discharge at a pressure of 300 pounds per square inch, or 3,500,000 cubic feet at 800 pounds. The capacity with the additional equipment will be 12,000,000 cubic feet at a discharge pressure of 300 pounds per square inch, or 6,500,000 cubic feet at 800 pounds.

The problem of adequate cooling water has been given consideration and the method previously used has been changed. With the expansion of the unitized equipment, the firm installed an enclosed jacket cooling water system, incorporating a treating plant for makeup water. Raw water will be used around the outside of heat exchangers and on other equipment not subject to dangerous scale formation.

OFF THE PRESS THIS WEEK



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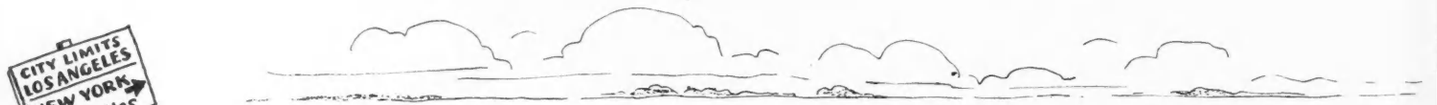

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COMPOSITE CATALOG of OIL FIELD and PIPE LINE EQUIPMENT

A STUDY of the petrographic and physical characteristics of sands in the Gulf Coast region of Texas and Louisiana conducted for the purpose of determining whether or not sands of certain geologic zones and formations may be distinguished as "that or this" zone by this means.

Part 1 appeared in THE OIL WEEKLY, November 23; Part 2, November 30; Part 3, December 7; Part 4, December 14; Part 5, December 21; and Part 6 in the December 28 issue.

Petrographic and Physical Characteristics

OF SANDS FROM SEVEN GULF COAST PRODUCING HORIZONS

By M. T. HALBOUTY,
Chief Geologist and Petroleum Engineer,
Glenn H. McCarthy, Inc., Houston, Texas

PART VII

Resume' of Conclusions

MANY conclusions were ascertained in the research conducted on the numerous samples studied. Some of these conclusions were definite and others ranged from a general aspect to feeble trends that with further research may eventually lead to facts. As stated earlier in this series the main purpose of this research is to determine whether or not sands of certain geologic zones and formations in the Gulf Coast have enough petrographical or physical characteristics that they may be distinguished as "that or this" zone by petrographical or physical means instead of by the application of paleontological methods—in other words, by this petrographical study the writer was concerned with the relative prospects of correlating sediments of the Gulf Coast of Texas and Louisiana by means of an intensive study of the component minerals and physical properties of the sand bodies. It was presumed that sufficient data derived from such work would produce enough results which would enable the processes of Gulf Coast sedimentation to be better understood, and which might lead to sufficient geologic clues from which stratigraphical structures could be interpreted.

Whether or not the purpose of this study has been accomplished is questionable according to opinion, but certainly enough interesting results have been derived from this work to induce further research.

The sands studied were from the Lower and Upper *MDv* Zone of Lower Miocene Age, *Discorbis* Zone of Middle Oligocene Age, *Heterostegina* Zone of Middle Oligocene Age, *Marginulina* Zone of Middle Oligocene Age, *Frio* of Lower Oligocene Age, *Cockfield* of Upper Yegua Age, and *Upper Saline Bayou* of Lower Yegua Age. A total of 315 sand samples were studied, or 45 from each zone. Each sample was subjected to texture tests, shape analysis, mineral determinations, and only 120 core samples were used for permeability recordings.

Distinguishing Features Found

The texture of the sands were determined by sieving with meshes ranging from 10 mesh = 1.981 mm to less than 200 mesh = less than .047 mm. Histogram charts were drawn to illustrate the various textural percentages. Many values and data were obtained from the study of the texture of the grains from the different horizons, which are valuable for correlation purposes. The sands from each zone show some particular distinguishing feature that readily makes correlation of zones by grain size possible. Of all the zones studied, the Frio sands differ most widely from all others. The large grains, which were prominently present in all the Frio sand samples, are the determinative factor in this difference. Textural results could be employed easily in the correlation of the Frio sands. All other sands also have correlative features and should be ascertained further in future study.

Many surprising features were noticed in the study of the shapes of the sand grains. The petro-

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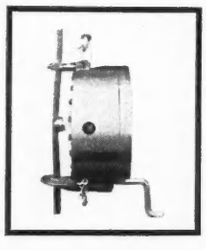

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graphic microscope was used in the determination of the shape of the grains by the cross-line method as mentioned earlier in the series. The conclusion derived from the study of the shapes of the grains were very variable and many trends were determined. However, these trends were so weak that no conclusive statement will be made concerning them at this time. Further study may determine that these small trends are extremely valuable, however, a few definite results were obtained in several of the sands. The grain shapes of the sands from the Miocene *MDv* zone, *Discorbis* zone, *Cockfield* horizon, and *Upper Saline Bayou* horizon are generally similar in that the grains show a maximum of sub-angular grains and a minimum of round grains. The *Heterostegina* sands were composed of a large percent of angular grains, and this characteristic is of diagnostic correlative value. The *Marginulina* grains were sharp and sub-angular and this sharpness is of extreme importance in the study of *Marginulina* sands. Frio sands contain appreciable amounts of rounded grains which are found to occur in every sample, a condition not recognized in the samples from the other horizons. This fact is of extreme importance for correlative purposes. Histograms and photomicrographs were illustrated to show shape results earlier in this paper.

Many Factors Determined

In all the geologic zones the sands contained minerals which were rather similar, if not wholly so; however, the quantity of a particular mineral would vary from one zone to the other; also a mineral may be absent in one zone and present in another. A number of correlative features were determined from the study of the minerals found in the sand grains. General and local mineral characteristics were found to occur, *general* for the entire area and *local* in the sense of a separated field. It can be stated readily that a study of the minerals of the sands in the Gulf Coast conducted on an intensive and complete scale would certainly be extremely valuable for correlative work.

Many factors were determined from the study of the permeability results. Observations concerning spacing of oil wells, factors influencing permeability, certain permeability trends in each geologic section, observations concerning electrical logs, and the relationship of permeability to porosity are the most important and from which definite conclusions were obtained.

Much Data Obtained

In referring to the entire study, it is very apparent that a great deal of data were obtained which influences final conclusions concerning not only the geologic horizon itself, but also the relationship of one horizon to another. Such relationship may reveal stratigraphic conditions heretofore unknown and which can only be ascertained by a petrographical and physical study. The author realizes that the work and results as shown herein is not an intensive and complete one and that further work is indeed warranted. However, the results obtained do prove the practicability of certain petrographical and physical trends which are of such importance as to make such work worth while.

(Concluded)

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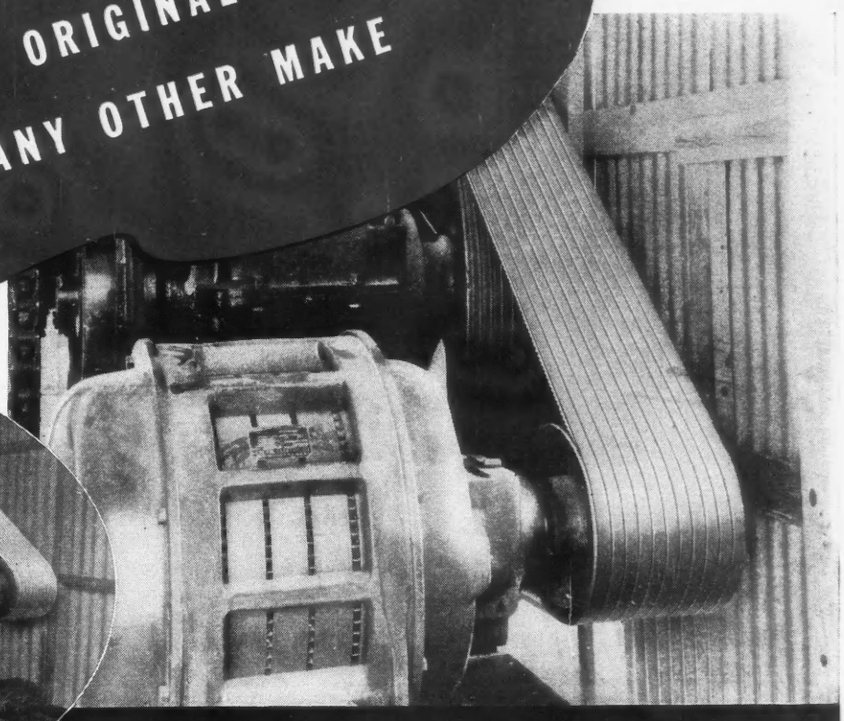

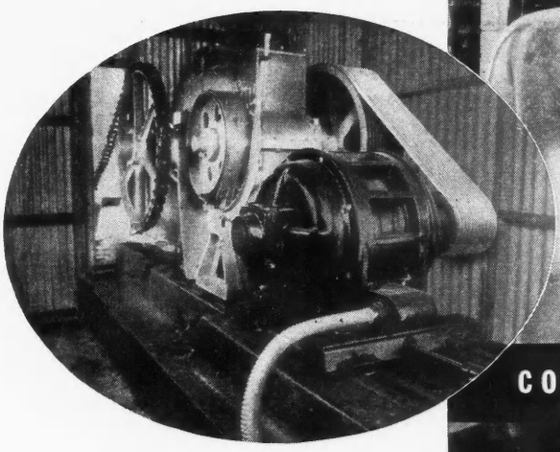

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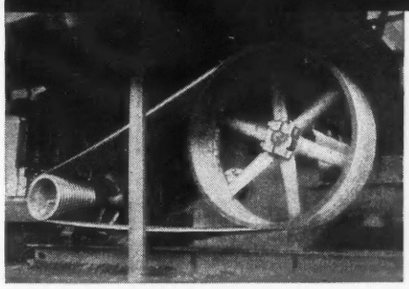

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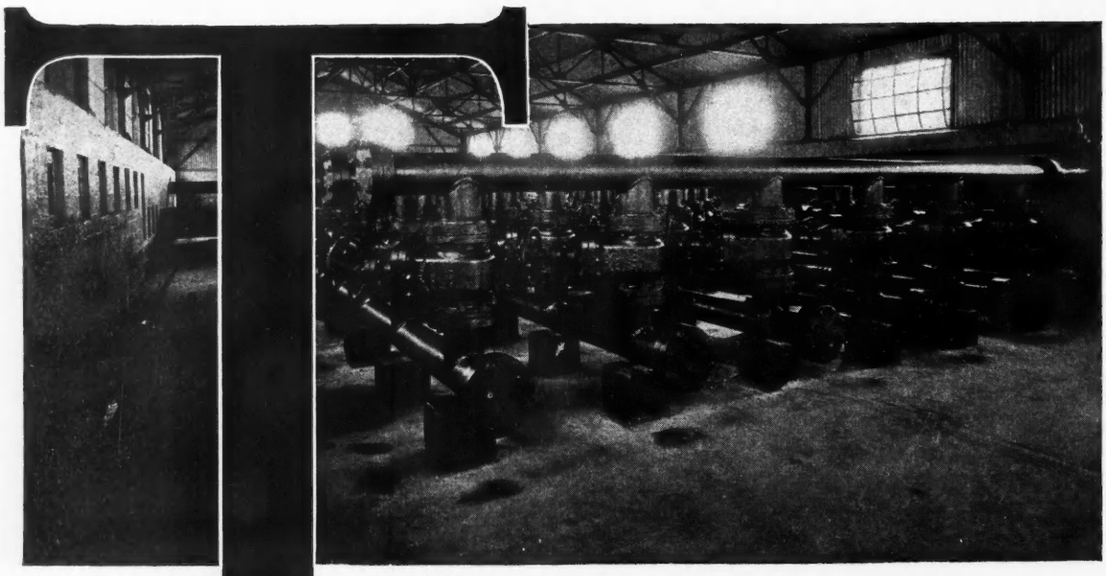

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Uneven wear is obviated by the rotating disc feature which permits the valve to seat in a new position with every closing. Those who make careful comparisons usually answer the valve question by specifying Darling—the Gate Valve that endures.

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Williamsport, Pa.

NEW YORK — OKLAHOMA CITY — HOUSTON

Mid-Continent Distributors:
International Supply Company
Moorlane Company

California Distributors:
Hickey Pipe & Supply Company
3375 East Slauson Avenue
Los Angeles, Calif.

DARLING
GATE VALVES

Markets Advance

HIGHER CRUDE PRICES ARE POSTED IN PENNSYLVANIA

THE markets have continued to move to higher levels.

The move toward higher crude oil prices became broader in scope last week, when postings for Pennsylvania grade oils were increased 12 to 15 cents a barrel.

It was generally assumed, meanwhile, that Mid-Continent purchasers generally would adopt higher prices, although action still was being deferred in the matter on the eve of the new year.

The 17 cent increase scheduled by Continental Oil Company, Barnsdall Oil Company, and others, becomes effective January 4, but it remained to be seen whether other purchasers also would raise postings, and if so by what amount. Reports out of Tulsa indicated a 12 cent increase probably would be generally adopted.

The refined oil markets last week remained mostly unchanged, although there was some strengthening of the positions of kerosene and fuel oils. Gasoline did not show much change, the market continuing somewhat unsteady.

Pennsylvania Prices Up

Along with other purchasers, Tide Water Pipe Company, Limited, effective December 28, increased postings for Bradford and Allegany grade crudes, of northern Pennsylvania, 12 cents a barrel, or from $2.45 to $2.57 a barrel. That was the first increase for those areas since January 13, 1936.

Also effective December 28, South Penn Oil Company increased postings 15 cents a barrel for Eureka, Southwest Pennsylvania, and Buckeye grades of crude.

These increases were attributed to the continued heavy demand for Pennsylvania grade crudes, which has brought about a draft on stocks sufficient to justify the higher market prices.

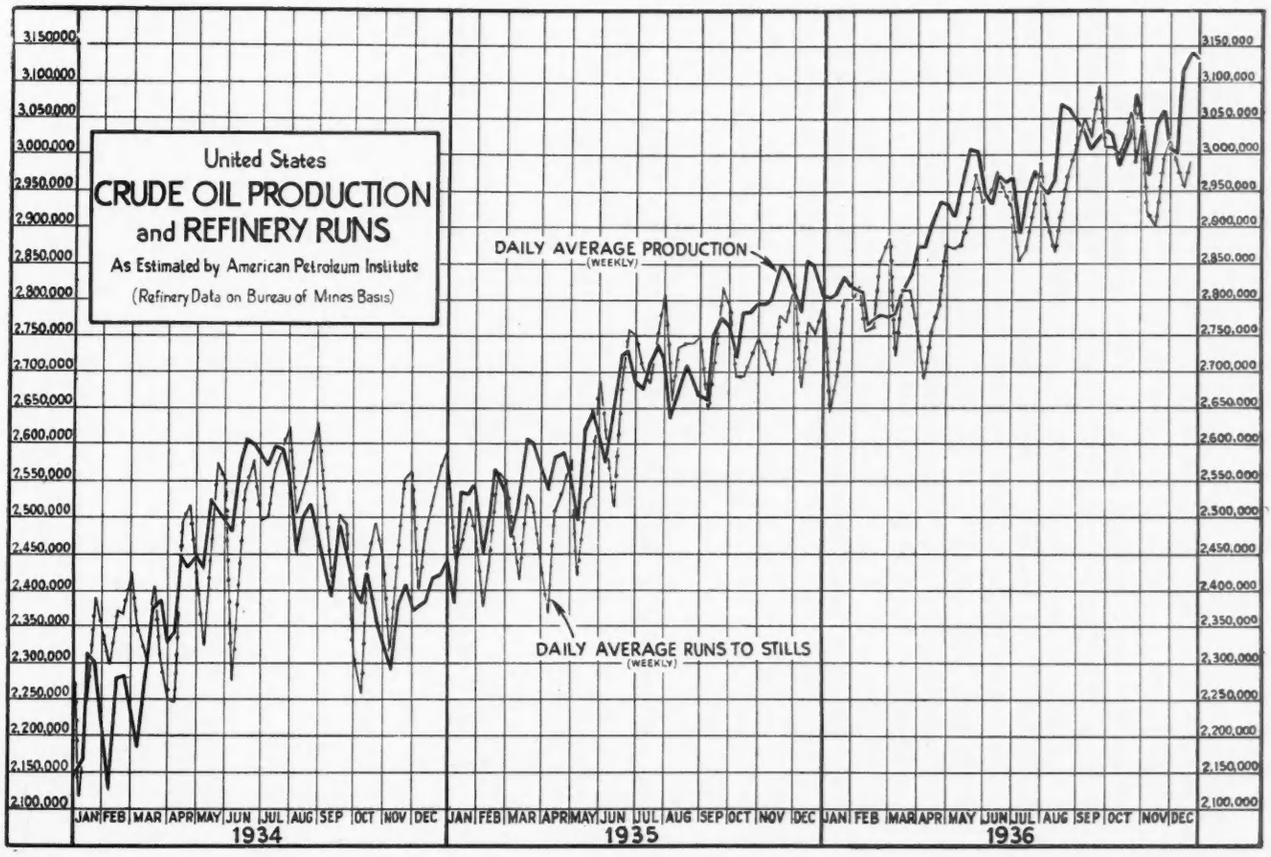
The greater increase for the southern than for the northern areas was ascribed to the relatively higher producing costs in the southern districts. In those southern areas, it is said, there has not been evidence of success from repressuring. It was pointed out, moreover, that still higher prices possibly will be required for the southern grade oils.

In the Bradford area, on the other hand, it is reported, repressuring has contributed toward efficiency in producing oil and thus toward holding down the producing costs. The savings so achieved are being passed on to the consumer under the new schedule of crude prices, which holds the Bradford increase down to 12 cents a barrel.

The new prices in the southern areas, following the 15 cent increase, are as follows: $2.32 for the Southwest Pennsylvania grade, $2.27 for the Eureka grade, and $2.12 for the Buckeye grade. Corning grade was left unchanged at $1.32 a barrel.

Tank Car Prices Unchanged

The factors that caused an inactive market in the previous week also prevailed again last week with similar results. Both buyers and sellers remained hesitant, probably because of the uncer-



tainty over future crude prices and because of the holiday season.

Tank Car Prices Unchanged

On the eve of the new year, U. S. motor gasoline tank car prices f.o.b. Oklahoma refineries were holding within the previous week's range of 4¾ to 4⅞ cents a gallon for 62 octane and below; 5⅛ to 5⅜ cents for 63 to 67 octane; and 5¾ to 5⅞ cents for 68 to 70 octane.

Corresponding prices in the Chicago market were: 4⅝ to 4⅞ cents, 5 to 5¼ cents, and 5½ to 5⅞ cents.

At East Texas refineries, fully tendered third grade gasoline ranged from 4⅝ to 4¾ cents.

Kerosene prices in the Oklahoma market ranged from 3¾ to 3⅞ cents a gallon for the 41-43 water white grade, f.o.b. refineries, and from 3⅞ to 4 cents for the 42-44 water white grade. In the Chicago area prices were ⅛ cent under those in Oklahoma.

In both the Oklahoma and the Chicago markets the No. 1 white burning oils ranged from 3⅝ to 3¾ cents a gallon, and the No. 1 straw grade from 3½ to 3⅝ cents; while the No. 2 straw grade ranged around 3½ cents and the No. 2 dark around 3⅜ cents.

Real Prosperity

[*Continued from page 11*]

program, it must look out for the interests of the consuming public. This has been successfully done. Gasoline in Texas is not high. The producer of a raw material can get a fair price for his product, and when the consumer is able to buy the finished product at a reasonable price, all are satisfied. This, to my mind, is the outstanding accomplishment of the Railroad Commission of Texas in the regulation of the oil and gas industry in 1936.

"We stand today without a single injunction against our regulatory reports with regard to oil production. After having gone through a haze of some 2000 law suits, we look forward hopefully and expectantly to 1937 as a year of unmatched prosperity for the oil producers of Texas and the nation.

"It is a source of pride and satisfaction that the Oil States, through the Oil States Compact, have been able to successfully work out our own production control problems without federal interference.

"Naturally Texas is greatly interested in retaining control herself over her own most important industry, the oil and gas industry, which means so much to Texas.

"Revenue from natural gas and its products brought into Texas in 1936 is $67,392,872; revenue from crude oil production brought into Texas in 1936 is $416,962,200; total $484,354,872."

Largest Tank Farm

[*Continued from page 12*]

industry could provide and the World War had about drained its storage tanks. Consequently the price of Mid-Continent crude oil went to $3.50 a barrel and even at that price a desperate effort was made to refill the tanks.

In 1921 dollar oil came back, as the prices dropped 50 cents and 25 cents per announcement until dollar oil was a fact and a painful one. There were meetings and threats at proration. They still were doing duty when the cluster of Seminole fields again played havoc with the price structure. They were doing duty when Oklahoma City added to the misery of Seminole and they were doing duty when East Texas put a final blow on the price structure and the industry saw 10 cents a barrel marked up against some of its crude oil.

From $3.50 a barrel to 10 cents a barrel. Such was the price fluctuation within the three decades these tanks served. Now they are being retired and not being replaced.

There is nothing romantic in dismantling a tank farm. The roof goes first, then the timbers and side walls. The steel goes to the junk yard and the timbers are stacked up behind a gigantic sign which announces that timbers are for sale.

In order to take care of tank bottoms, 13 of the 107 tanks at the Copan farm have been retained by the company. The tank bottoms will be treated and valuable material recovered. Then the remaining 13 tanks will be sold.

CONSTRUCTION STARTS

To add three loops to Wink-Kemper trunk line

San Angelo, Texas. — Delivery of 8-inch pipe began last week for the immediate construction of three loops, aggregating about 45 miles of line, on Humble Pipe Line Company's West Texas system between Wink station, near Hendrick field, to its main terminal at Kemper, near Big Lake field.

Line capacity out of Wink station will be boosted 10,000 barrels to a capacity of 60,000 barrels daily by the addition of a 21-mile 8-inch loop, extending south towards Crane station. A short loop will be built between Crane and McCamey stations, and a 15-mile loop will be added between McCamey and Kemper. The company's combination 10-inch and 12-inch carrier, extending from Kemper to Ingleside terminal, near Corpus Christi, is also slated to be enlarged by adding loops to increase the capacity to about 65,000 barrels daily, but pipe has not arrived for this unit.

A. P. TANKERSLEY, an employe of the Texas Railroad Commission in the East Texas field for the past five years, has been transferred from Kilgore to Dallas, where he has assumed charge of a district office.

Summary of Wells Completed in the United States Week Ending January 2, 1937

STATE	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions, 1937	Total Completions this date, 1936
Alabama	....	....	....	....	.....	....	....
Arkansas	....	....	....	....	.....	....	....
California	19	15	....	4	8,040	19	17
Colorado	1	....	....	1	.....	1	....
Florida	....	....	....	....	.....	....	....
Illinois	....	....	....	....	.....	....	....
Indiana	....	....	....	....	.....	....	....
Kansas	40	31	1	8	47,153	....	7
Kentucky	4	3	....	1	76	4	....
Louisiana	7	5	....	2	3,194	7	12
*Michigan	29	9	6	14	1,489	29	37
Mississippi	....	....	....	....	.....	....	....
Montana	2	1	1	....	86	2	4
Nebraska	....	....	....	....	.....	....	....
New Mexico	15	13	1	1	30,479	15	6
New York	....	....	....	....	.....	....	....
Ohio	19	4	13	2	70	19	27
Oklahoma	63	48	1	14	109,064	....	30
Pennsylvania	....	....	....	....	.....	....	....
Texas	213	163	5	45	180,210	213	222
Utah	....	....	....	....	.....	....	....
West Virginia	2	1	1	....	4	2	20
Wyoming	4	3	....	1	2,808	4	2
Total this week	418	296	29	93	382,673	315	384
Total last week	428	290	39	99	516,279	....	....
Total this year	418	296	29	93	.....	....	....

* Includes 4 oil wells, 2 gas, and 7 failures and 790 barrels initial production completed during week ending December 26.

Comparison of Permits Granted for New Wells

STATE	Week Ending Jan. 2	Total this Mo.	Total this Year	Total this Date Last Year	1936 Year Total
Arkansas	...	...	...	3	103
California	19	19	19	6	1,054
Louisiana	...	...	...	17	1,107
Kansas	52	52	52	18	1,873
Michigan	13	13	13	10	762
Oklahoma	52	52	52	29	2,594
Texas	255	255	255	194	15,582
Total	391	391	391	277	23,075

PRODUCTION DOWN

Exceeds three million mark despite drop

UNITED STATES crude oil production decreased substantially during the past week, ended January 2, dropping to 3,099,550 barrels daily, according to the regular compilation of estimates by The Oil Weekly. That was 44,000 barrels a day less than in the previous week. It was 169,250 barrels a day more than the Bureau of Mines recommendation.

The decline from the previous week reflected material decreases in Oklahoma, California, and Kansas and a slight drop for Louisiana. Texas and New Mexico showed small increases.

Oklahoma's output declined to 579,900 barrels daily. That was 15,700 barrels a day less than in the previous week, but 12,900 barrels a day more than the federal allocation.

California Down

California averaged 572,000 barrels daily, or 19,000 barrels a day less than in the preceding week, but 18,600 barrels daily more than the Bureau of Mines recommendation.

Kansas showed a decrease of 10,300 barrels, in averaging 165,850 barrels a day. That was 9950 barrels a day more than the federal quota.

Texas last week averaged 1,216,000 barrels daily, or 3500 barrels a day more than in the previous week and 70,800 barrels a day more than the Bureau of Mines suggestion.

New Mexico produced last week at the rate of 86,300 barrels daily, which was 700 barrels a day more than in the previous week and 8,000 barrels a day more than the Bureau of Mines allocation.

Louisiana's output was practically unchanged, showing a decrease of 200 barrels in averaging 241,800 barrels daily. That was 37,000 barrels a day more than the federal allocation.

22,000 OIL WELLS

East Texas field reports 75 rigs in active service

Tyler, Texas.—The East Texas field entered the new year with slightly more than 22,000 completed oil wells. Completions made during the last few days in December were required to attain this unusual mark for a single field. Last week's quota declined to 21, including two dry holes, owing to the customary observance of the holidays. Current reports on field activity show approximately 75 rigs in service, while locations, derricks, rigs and idle tests boost the total to 160 operations.

Based upon preliminary figures, the field added about 2450 wells to the proration schedule during 1936, as compared to an increase of 3992 wells during 1935. This slump amounts to about 38.6 percent. The proration schedule does not accurately reflect the number of new wells completed within the year just ended, as a number of old producers are being dropped each month as depleted wells.

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in Dec.)	ACTUAL PRODUCTION BARRELS DAILY FOR WEEK ENDING	
		January 2	December 26
TEXAS—			
Texas Panhandle	.....	63,800	64,300
North Texas	.....	64,200	65,100
West Central Texas	.....	33,100	33,600
West Texas	.....	167,100	166,700
East Central Texas	.....	89,100	86,500
*East Texas Field	.....	446,900	446,700
South Texas	.....	180,300	180,200
Texas Gulf Coast	.....	171,500	169,400
*Total Texas	1,145,200	1,216,000	1,212,500
OKLAHOMA—			
Oklahoma City	.....	137,700	161,325
Seminole Area	.....	134,775	131,750
Tatums	.....	3,475	3,500
Lucien	.....	13,800	13,750
Fitts	.....	77,150	69,450
Edmond	.....	15,650	16,350
Others	.....	197,350	199,475
Total Oklahoma	567,000	579,900	595,600
KANSAS—			
Ritz-Canton	.....	6,300	6,175
Voshell	.....	2,775	2,725
Nikkel-Hollow	.....	3,600	3,550
Sedgwick	.....	4,850	4,825
Burrton-Haury	.....	14,100	14,000
Lorraine	.....	3,325	6,150
Oxford	.....	3,200	3,150
Others	.....	127,700	135,575
Total Kansas	155,900	165,850	176,150
LOUISIANA—			
North Louisiana	.....	81,600	79,800
Louisiana Gulf Coast	.....	160,200	162,200
Total Louisiana	204,800	241,800	242,000
ARKANSAS	26,800	28,100	27,900
CALIFORNIA—			
Long Beach	.....	64,000	65,000
Santa Fe Springs	.....	42,000	44,000
Huntington Beach	.....	36,000	38,000
Dominguez	.....	25,500	25,000
Inglewood	.....	12,000	14,000
Ventura Avenue	.....	35,000	33,000
Seal Beach	.....	9,500	8,500
Midway-Sunset	.....	65,000	64,000
Elwood	.....	10,500	10,500
Kettleman Hills	.....	76,000	78,000
Mountain View	.....	21,000	21,500
Playa del Rey	.....	10,500	10,500
Others	.....	165,000	179,000
Total California	553,400	572,000	591,000
MOUNTAIN STATES—			
Wyoming	40,200	46,200	47,400
Montana	14,300	18,200	18,100
Colorado	4,500	3,700	3,800
Total Rocky Mountain States	59,000	68,100	69,300
NEW MEXICO	78,300	86,300	85,600
EASTERN STATES	110,600	113,800	115,600
MICHIGAN	29,300	27,700	27,900
*Total United States	2,930,300	3,099,550	3,143,550
*Surreptitiously produced oil in East Texas, not included in above figures, estimated at	.....	8,000	8,000
Grand Total, including surreptitious production	.....	3,107,550	3,151,550

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to December 31, 1936)

DISTRICT	Bottom Grav.	Dif.	Top Grav.	Date
Oklahoma-Kansas	28—$0.94	2¢	40—$1.18	1- 9-36
N. and N.-C. Texas	28— .84	2¢	40— 1.08	1- 9-36
Texas Panhandle				
Gray County	34— .86	2¢	40— .98	1- 9-36
Carson-Hutchinson	34— .81	2¢	40— .93	1- 9-36
West Texas				
Andrews, Crane, Crockett, Ector, Glasscock, Howard, Winkler, Upton	29— .76	2¢	36— .90	1-14-36
Pecos	* .85			1-14-36
West Central Texas	28— .84	2¢	40— 1.08	1- 9-36
East Central Texas	28— .91	2¢	40— 1.15	1- 9-36
East Texas	*1.15			1- 9-36
Talco	* .65			11-1-36
Rodessa	*1.10			1- 9-36
Texas Gulf Coast				
Anahuac - Dickinson, Flour Bluff, Turtle Bay	30— 1.04	2¢	40— 1.24	1- 9-36
Conroe	35— 1.24	2¢	40— 1.34	1- 9-36
Tomball, Satsuma	*1.30			1- 9-36
Cleveland	*1.00			1-11-34
†Goose Creek, Hull, Liberty, Orange, Pierce Junction, Barbers Hill, Raccoon Bend, Sugarland, West Columbia, Thompsons, Mykawa, Amelia, Plymouth, Quintana-O'Connor,	Below			
North Quintana	17— .88	2¢	34— 1.22	1- 9-36
South and S. W. Texas	Below			
Refugio (Light)	17— .88	2¢	34— 1.22	1- 9-36
Refugio (Heavy)	* .95			11- 1-36
Greta (Heavy)	* .95			11- 1-36
Saxet (Light)	*1.22			10- 1-36
Saxet (Heavy)	* .95			11- 1-36
Taft (Heavy)	* .95			11- 1-36
Mirando	* .90			11- 1-36
Pettus	*1.25			1- 9-36
Salt Flat	* .97			1-14-36
Darst Creek	* .97			1-14-36
Placedo (Heavy)	* .90			11- 1-36
Placedo (Light)	* .95			4- -36
Port Lavaca	* .97			
Heyser (Light)	*1.15			11-1-36
Heyser (Heavy)	* .90			11-1-36

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Bottom Grav.	Dif.	Top Grav.	Date
Arkansas				
El Dorado (Light) and Rainbow	25—$0.78	2¢	40—$1.10	1-10-36
El Dorado East Field and Smackover	* .75			1-10-36
North Louisiana	25— .78	2¢	40— 1.10	1-10-36
Urania	* .97			1-10-36
South Louisiana	Below			
Lockport	19— .92	2¢	34— 1.22	1- 9-36
Iowa Cameron Mds.	19— .82	2¢	34— 1.12	1- 9-36
Lafitte	*1.12			11- 1-36
Rocky Mountain States				
Salt Creek	29— .94	2¢	40— 1.18	1-10-36
Elk Basin	*1.18			7-20-36
Frannie (Light)	* .70			11- 4-36
Frannie (Heavy)	* .62			11- 4-36
Grass Crk., Wyo., (Light)	*1.18			7-20-36
Grass Creek (Heavy)	* .62			11- 4-36
Hamilton Dome	* .57			11- 4-36
Big Muddy	*1.11			1- 9-36
Rock Creek, Wyo	*1.08½			11- 1-36
Sunburst	*1.15			6- 5-36
Lance Creek	* .90			1- 9-36
Osage	*1.08			
Cat Creek	*1.07			8-25-33
Cut Bank	*1.35			6- 3-36
Pondera	*1.05			9-29-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	29— .76	2¢	36— .90	1-14-36
Mid-West States				
Lima	*1.15			9-18-36
Illinois	*1.23			1- 9-36
Princeton	*1.23			1- 9-36
Western Kentucky	*1.28			11-1-36
Pennsylvania				
Bradford	*2.57			12-28-36
Sw. Pa. Pipe Line	*2.32			12-28-36
Eureka Pipe Line	*2.27			12-28-36
Buckeye Pipe Line	*2.12			12-28-36
Corning Grade	*1.32			9-18-36
Michigan				
Central Michigan	*1.32			9-16-36
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33
Mexico				
F.O.B. Tampico (Net)	‡0.96			

* All gravities—flat rate.
‡ Average price, all oil sales being to small refineries.
‡ U. S. Currency, buyer pays tax.

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid.-Cont. (36 Gr.)	Calif. (26 Gr.)
June 19, 1933	Up 10	Up 19	.....
June 26, 1933	Up 10	.....	Up 9-12
July 6, 1933	Up 13	Up 10	.....
July 17, 1933	Up 15	.....	.....
July 28, 1933	Up 15	.....	.....
August 11, 1933	Up 10	.....	.....
August 24, 1933	.....	Up 10	.....
August 30, 1933	Up 15	.....	.....
September 6, 1933	Up 10	Up 10	Up 15
September 8, 1933	.....	Up 15	.....
May 1, 1934	Up 10	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25	.....	.....
January 4, 1935	Up 15	.....	.....
February 4, 1935	Up 15	.....	.....
May 16, 1935	Cut 15	.....	.....
June 26, 1935	Cut 15	.....	.....
July 16, 1935	Cut 10	.....	.....
August 29, 1935	.....	.....	Cut *4
September 6, 1935	Up 5	.....	.....
October 29, 1935	Up 15	.....	.....
November 1, 1935	.....	.....	Up *28
November 18, 1935	Up 15	.....	.....
December 6, 1935	.....	.....	Up *9
January 9, 1936	.....	Up 10	.....
January 13, 1936	Up 15	.....	.....
February 26, 1936	.....	.....	Up 15
December 28, 1936	Up 12	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

TEXAS—2¾ cents or 2¾ percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ½ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

* All gravities—flat rate.
♦ Signal Hill 26 gravity.
ɪ Seal Beach 26 gravity.

CALIFORNIA OIL PRICES

(All gravities above those quoted take highest prices of that field. Effective February 26, 1936)

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canyon	Athens Rosecrans	Elwood Terrace	Torrance	Richfield	Whittier East Coyote La Habra	Montebello	West Coyote Hills	Santa Fe Springs	New Hall McKittrick Kern River Round Mountain	Mountain View	Midway-Sunset Buena Vista Hills Elk Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$.80	$.79	$.78	$.79	$.80	$.76	.....	.....	$.80	$.76	$.76	$.77	$.78	.....	$.70	....	$.70	$.70	$.70	....
15-15.9	.80	.79	.78	.79	.80	.76	.....	.....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
16-16.9	.80	.79	.78	.79	.80	.76	.....	.....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
17-17.9	.80	.79	.78	.81	.80	.76	.....	.....	.80	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
18-18.9	.80	.79	.78	.84	.80	.78	.....	.....	.82	.76	.76	.77	.78	.....	.70	....	.70	.70	.70	....
19-19.9	.82	.79	.82	.87	.84	.81	.....	.....	.85	.76	.78	.77	.78	.....	.70	$.70	.74	.74	.71	$.70
20-20.9	.85	.79	.85	.90	.88	.84	.....	.....	.88	.78	.82	.77	.80	.....	.....	.70	.78	.78	.72	.70
21-21.9	.88	.79	.89	.93	.93	.88	.....	.....	.91	.80	.85	.77	.84	$.78	.....	.73	.82	.82	.74	.70
22-22.9	.92	.82	.92	.96	.98	.92	.....	.....	.93	.84	.89	.79	.88	.78	.....	.77	.87	.86	.78	.72
23-23.9	.95	.86	.96	.99	1.02	.96	$ 84	.....	.96	.88	.93	.82	.92	.78	.....	.80	.93	.90	.82	.76
24-24.9	.99	.91	1.00	1 02	1.06	.99	88	.....	.99	.91	.96	.85	.96	.82	.....	.84	.97	.94	.86	.79
25-25.9	1.03	.95	1.03	1.05	1 11	1.03	93	.....	1.02	.95	.....	.89	.99	.86	.....	.88	1.01	.98	.90	.83
26-26.9	1.06	1.00	1.07	1.09	1.16	1.06	98	.....	1.05	.98	.....	.92	1 03	.90	.....	.91	1.06	1 02	....	....
27-27.9	1.10	1.05	1.11	1.12	....	1.10	1 03	.....	.....	1.02	.....	.96	1.06	.95	.....	.95	1.10	1.06	....	....
28-28.9	1.14	1.10	1.14	1.15	.....	1.14	1.07	.....	.....	1.06	.....	.99	1.10	.99	.....	.99	1.15	1.10	....	....
29-29.9	1.17	1.15	1.18	1.18	F.O.B.	1.17	1.12	.....	.....	1.09	.....	1.03	1.14	1.03	.....	1.02	1.20	1.14	....	....
30-30.9	1.21	1.19	1.22	1.21	Pipe	1.21	1.17	F.O.B.	.....	.....	.....	1.07	1.17	1.08	.....	1.06	1.25	1.18	....	....
31-31.9	....	.....	....	1.24	Line	1.24	1.22	Ship	Kettleman Hills			1.11	1.21	1.12	.....	1.09	1.29	....	....	....
32-32.9	....	....	....	1.27	....	1.27	1.27	....				1.14	1.25	1.16	.....	1.13	1.34	....	....	....
33-33.9	....	....	....	....	....	....	1.32	$.128		1.19		1.18	1.28	1.20	.....	1.17	1.38	....	....	....
34-34.9	....	....	....	....	....	....	1.37	1.32	....	1.23	....	1.22	1.32	1.25	.....	1.20	.....	....	....	....
35-35.9	....	....	....	....	....	....	1.42	1.35	....	1 27	....	1.25	....	1 29	.....	....	.....	....	....	....
36-36.9	....	....	....	....	....	....	1.46	1.39	....	1.31	....	1.29	....	1.33	.....	....	.....	....	....	....
37-37.9	....	....	....	....	....	....	1.51	1.43	....	1.35	....	1.32	....	1.37	.....	....	.....	....	....	....
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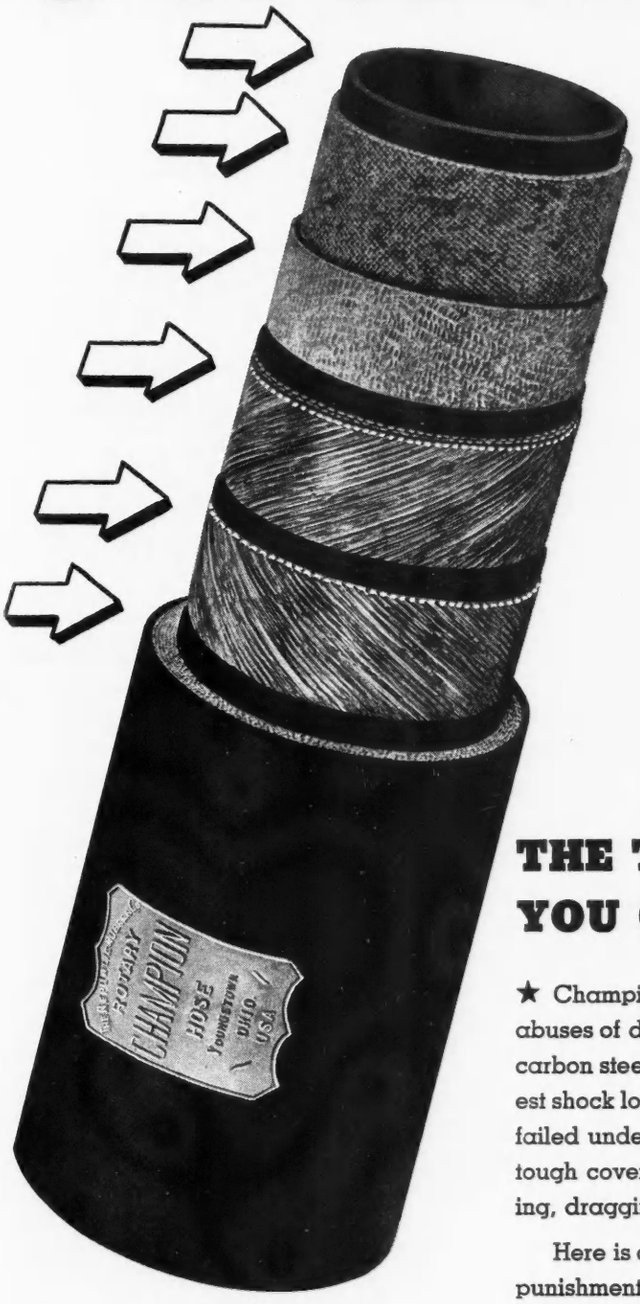
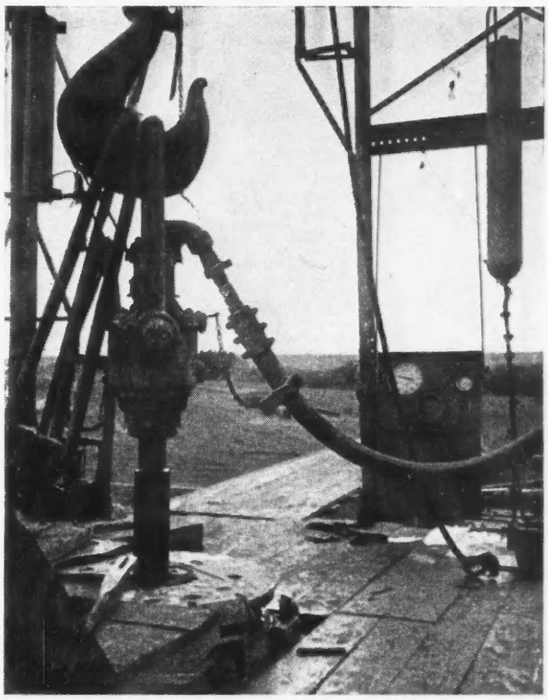
CHAMPION





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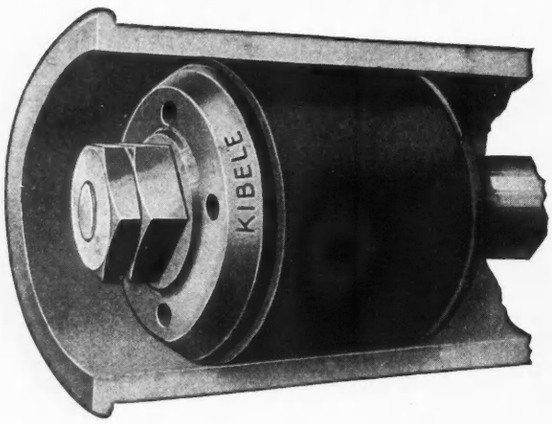

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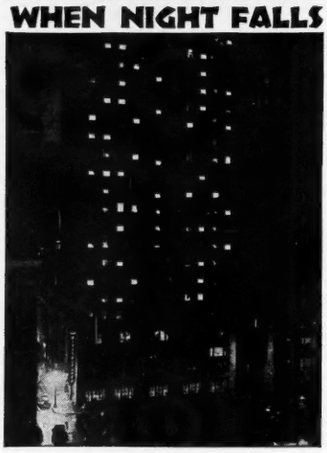

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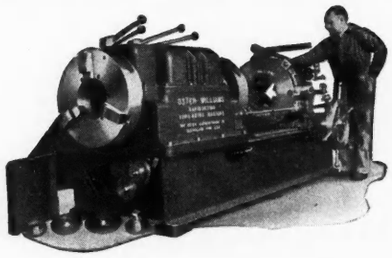

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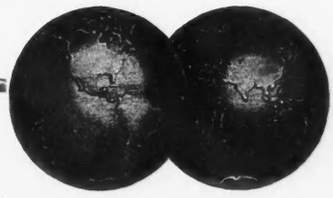

Edited by WM. V. GROSS, Associate Editor

Germany's Weakness

LIMITED LOCAL RESERVES CALL FOR SYNTHETIC PRODUCTION

By CHARLES WILL WRIGHT[1]

GERMANY'S dependence upon foreign sources for petroleum products is one of the weakest spots in its drive for economic preparedness and a most vulnerable one in case of war. For this reason the development of domestic oil resources and the manufacture of oil products from coal hold a dominant position in Germany's present plans of economic mobilization which are being pushed by all available means.

Viewed from the outside this forced production of gasoline and mineral oils from local wells and of the synthetic products from coal is far from being commercially profitable, due to the low yield per oil well and to the high cost of the plants to process the coal. The final production cost of gasoline produced in Germany is roughly estimated at four times the world market price.

Motor fuels, however, are a national necessity and must be produced at home regardless of cost, as Germany has not the required foreign currencies to buy them outside Germany. Hence the high import duty in order to protect the domestic producers and to provide funds for the federal financing of drilling operations and processing plants.

The reason given for pushing domestic production is that the loss due to local manufacture is in marks which stay in Germany and that it is better to lose marks in such high-cost production operations than gold or foreign exchange in importing from abroad.

Regardless of reasons given, Germany wants to be ready to produce petroleum products, especially gasoline, Diesel oil, and lubricating oils in sufficient quantities from domestic sources for military aviation and motorized military units in case of war.

In 1935 Germany imported 3,832,000 tons of mineral oils valued at 165,000,000 marks. Domestic production mineral oils (natural and synthetic) approximated 1,250,000 tons or about 26 percent of total requirements. However, by the extensive use of benzol and alcohol in the motor fuels it was possible to increase domestic production to, roughly, one third of the amount consumed in 1935.

But with the rapid rise in demand for gasoline and for heavy motor oil, due to greater use of Diesel engines, the problem of keeping down imports is a difficult one. Attention is being given to the development of gas motors on motor vehicles for short haul traffic using wood, charcoal and coal dust which is converted into gas in the vehicle itself, but such measures can make only a very small contribution toward solving the problem. To raise the domestic production of petroleum products, the government is giving much financial support, both for the development of new oil fields and for the construction of new coal-processing plants, and is helping domestic industry by import tariffs and decrees restricting imports, regulating distribution and reducing competition.

Future production expansion will depend largely on (1) federal financial support, (2) the ability of the geologist and geophysicist to find new oil fields in Germany, and (3) upon the technician and chemist to discover less costly methods of producing gasoline and mineral oils from coal.

Oil Fields

The most productive oil fields are in north Germany, within a radius of 20 miles of the city of Hanover, which have been responsible for about 95 percent of Germany's crude oil output. These oil fields are within the salt dome areas, four of which have been productive for many years, while four new fields were brought into production in 1935, two between Hanover and Brunswick, one near Halberstadt to the south of Brunswick, and the fourth near Heide in Holstein.

The other oil fields are widely scattered, one in the Upper Rhine valley between Heidelberg and Karlsruhe where the oil occurs in Tertiary beds (Oligocene) another in Thuringia just east of Muehlhausen where oil is found in the dolomites

[1] Foreign Mineral Specialist, U. S. Bureau of Mines, attached to the consulate general at Berlin, Germany.

Synthetic Fuel

SECRECY WILL SURROUND GERMAN DEVELOPMENTS

The German press, which has heretofore given much publicity to the construction of plants for the production of synthetic gasoline, has recently been handed instructions from censors under the Ministry of Propaganda and Public Enlightenment to devote no more space to the subject, Berlin newspaper men told the American Commercial Attache. This puts the lid on a construction program which is expected to be launched during 1937 to fulfill the pledge recently made by Chancellor Hitler to make Germany entirely self-supporting in light fuels within 18 months. At present more than a million metric tons of gasoline is imported annually.

Synthetic gasoline plants in existence in Germany had in November, 1936, a total rated capacity of about 950,000 metric tons. Their 1936 production probably will not equal this amount, but reports have it that they are expected to go over capacity during 1937. Germany has about 700,000 metric tons of light fuel available from other domestic sources. This amount includes alcohols and benzol mixed with gasoline and gasoline produced from local crude. The visible total domestic production of all light fuels for 1937 is, therefore, little more than 1,700,000 metric tons, while consumption probably will be around 2,300,000 metric tons. Consumption will exceed domestic production by 600,000 metric tons, and 18 months is the time Chancellor Hitler has allowed in which to find ways and means of producing that additional amount locally.

There are only two immediate ways of arriving at that goal; one is to require more alcohol and benzol to be mixed with gasoline and the other is to build aditional synthetic gasoline factories. That Germany will take the first way is still questionable; that it will take the second is a certainty. But that it can erect and have in operation enough plants in 18 months to produce 600,000 metric tons annually is doubtful.

of Upper Permian age, and a third area at Tegernsee in Bavaria with oil occurring in the Miocene beds.

Federal Drilling Plan and Subsidies

The "Reichsbohrplan" (federal drilling program) was drawn up early in 1934, its object being (1) to push explorations for oil in order to determine whether Germany possesses sufficient reserves to maintain and eventually increase the present production of crude oil, and (2) to unite all explorations for oil under a central competent direction which includes staff members of the oil companies, the federal bureaus, and the drilling companies. The field studies, including geophysical surveys, and the complete records of all wells drilled are made by the Geologische Landesanstalt (Geological Survey).

While in 1934 there were but five productive oil fields in Germany, today the number has been doubled due to the carrying out of the federal "Reichsbohrungsplan" established in 1934.

New Fields

Three of the new fields are in the province of Hanover, namely Moelme, Falkstein and Gifhorn, one in Holstein at Heide, and the fifth at Forst near Bruchsal in the Rhine valley. Besides these new fields oil has been discovered in a number of places worthy of further investigation.

During the first year of this drilling program from April 1, 1934, to March 31, 1935, a total of 67,800 meters were drilled, and during the second year about 65,000 meters were drilled. The ratio of dry holes to the productive ones was about 1.5 to 1. The total meterage of the oil wells drilled in Germany was as follows: 1932, 46,000 meters; 1933, 71,000 meters; 1934, 133,000 meters; and 1935, 175,000 meters.

Of particular importance during the past two years has been the close cooperation of the oil companies and the drilling contractors with the national economic group for oil wells and the geological survey in the study of the fields favorable for drilling and in the development of better drilling methods.

Crude Oil Production

The total output of the oil wells and oil mines in Germany from 1928 to 1935, reduced to barrels of 42 gallons, is shown in the accompanying table.

Official figures published in Germany are given in metric tons. For the above conversion into barrels a factor approximating 7 barrels per metric ton has been used.

During 1935 the following new fields started production:

	1935		6 Mo. 1936
	Barrels	Tons	Tons
Moelme field (Hanover)	47,698	6,814	7,012
Gifhorn field (Hanover)	4,858	694	2,397
Fallstein field (Hanover)	9,156	1,308	15
Heide field (Holstein)	10,948	1,564	5,278
Forst field (Baden)	10,871	1,553	2,639
Total	83,531	11,933	17,341

In 1935 Germany's crude oil output jumped from 314,602 tons in 1934 to a new high of 429,679 tons, due principally to the greater number of wells drilled which were nearly twice the number drilled in 1934. As compared with the 1934 production increased 37 percent. However, due to increased consumption, the percentage of total oil consumption, supplied from domestic wells, remained about the same as in 1934, or 11 percent.

Because of increased drilling and mining operations for crude oil, the number of men employed for production jumped from 2311 in 1933 to 2987 in 1934 and to 4111 in 1935. This gives a yield of about 105 tons or 735 barrels per man-year.

Year	Nienhagen-Henigeen Field	Wietz Steinforde Field	Celheim Eddesse Field	Oberg Field	Volkenroda Field	German Reichs' Total in Barrels	Tons
1928	274,323	322,742	679	46,319	.....	644,315	92,045
1929	310,891	337,582	10,535	67,578	.....	720,069	102,866
1930	586,404	427,539	100,716	72,485	29,806	220,296	173,842
1931	506,548	403,634	213,549	116,088	360,885	1,602,517	228,513
1932	769,403	366,982	230,979	130,711	110,481	1,608,558	229,796
1933	1,014,853	376,628	127,211	110,131	40,698	1,670,109	238,503
1934	1,685,124	363,118	52,001	88,935	12,250	2,202,214	314,602
1935	2,318,477	351,855	53,466	195,153	5,229	3,007,711*	429,679
1936 (6 mos.)	1,104,390	166,131	26,131	82,128	2,989	1,505,087*	215,012

* Includes production of new fields given below.

Refineries in Germany

The following table gives the number and capacity, in tons of raw material that can be treated, of the oil refineries in the different districts in Germany.

District	Number of Refineries	Total Capacity Metric Tons
Hamburg	13	1,700,800
Bremen	2	150,000
Hanover	3	166,000
Rhein	6	263,500
Berlin	3	54,200
Thuringia	1	21,000
Wurttemberg	1	10,000
Bavaria	2	30,000
Saxony	2	20,000
Total	33	2,415,500

As a whole these refineries are quite different in the processes used and have been built for the treatment of special raw products.

Of interest is the new refinery of 360,000 tons capacity completed in 1935 by the Europaische Tanklager & Transport A.G. of Hamburg for the production of gasoline from imported crude oil, and the doubling of the capacity of the refinery owned by the "Deurag" near Nieburg from 100,000 to 200,000 tons for the additional output of the Nienhagen field. This is now completed, and a large extension in its plant for lubricating oils is under construction.

By-Product Gasoline

For many years benzol, obtained as a by-product from the gas derived in the production of coke and from the illuminating gas plants, has been used in Germany to blend with gasoline for motor fuel. Its production has averaged about 300,000 tons a year, about 90 percent coming from the coke plants and 10 percent from the illuminating gas plants. The recovery of benzol per cubic meter of gas is from 20 to 30 grams. Efforts are being made to extend the number of plants for the production of benzol from gas to the smaller municipal gas plants and to bring the output of motor fuel from this source to over 400,000 tons a year. As it is a by-product its output depends largely upon the production of coke required for the steel industry.

Synthetic Gasoline

Of greatest importance for gasoline production is the increase each year in the number and capacities of the plants for the production of synthetic gasoline using lignite and coal as the base. In 1935 the output of synthetic gasoline was 266,000 tons as compared with 97,500 tons of gasoline from domestic crude oil.

The two processes, "I. G. Bergius" and "Fischer-Tropsch" are used in the extraction of gasoline using coal as the base. Both processes are adaptable to use either lignite or coal and yield gasoline as well as Diesel and other oils. Another process has been introduced involving the use of solvents for securing an extract from coal which can be converted into a heavy motor fuel. This process, so-called "Pressure Extraction" process, is still in the experimental stages.

Thus far the "I. G. Bergius" is the principal process in use namely at the Leuna plant with 350,000 tons annual capacity, the Magdeburg and Bohlen plants, both near Leipzig, and both with 170,000 tons capacity, and the Scholven plant with 125,000 tons capacity at Gelsenkirchen in the Ruhr district. Certain of these plants are still under construction, (November, 1936). Somewhat less than two tons of coal or dried lignite and 2000 cubic meters of hydrogen are required to produce one ton of synthetic gasoline by this process.

There are also four plants using the "Fischer-Tropsch" process namely at Rauxel for 40,000 tons per year, at Holten for 30,000 tons and at Homburg for 25,0000 tons, all three being for coal from the Ruhr district. The fourth plant is that at Ruhland, north of Dresden, for 150,000 tons annual output. Coke is used as the base at the first three plants, the consumption being about four tons coke per ton of gasoline, while at the Ruhland plant lignite briquettes will be used as the base. As the "Fischer-Tropsch" process operates at low temperatures and pressures as compared with the high-pressure hydrogenating plants of the "I. G. Bergius" method, it is believed that the cost of gasoline by this process is somewhat less than by the "I. G. Bergius" process.

The total annual capacity of all the plants in operation and in construction for the production of synthetic gasoline is therefore somewhat over 1,000,000 tons. As to the production cost for synthetic gasoline, the estimates are from 18 to 21 cents a gallon, whereas imported gasoline delivered at Hamburg costs 4½ cents a gallon, or less than one fourth.

The following statement compares the production of the various derivatives obtained from lignite during the years 1934 and 1935.

Estimated Production of Mineral Oil Derivatives from Lignite in Germany in 1934 and 1935

(In Metric Tons)

	1934	1935
Gasoline	169,400	241,900
Lubricating oil	300	400
Gas (Diesel) oil	40,200	48,800
Fuel oil	75,500	90,400
Paraffin	17,100	20,600
Tar (Pitch)	15,400	18,700
Gas coke	9,600	11,700
Total	327,500	432,500

[To Be Continued]

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OUTPUT HIKED

New Mexico allowable adjusted to better demand

Hobbs, N. M.—New Mexico strengthened its position as the sixth largest oil producing state at the turn of the year as result of the Oil Conservation Commission granting an increase of 6600 barrels, making the top allowable 92,800 barrels daily for the January 1-16 period. The production hike is more than adequately supported by larger crude buying nominations made by three majors serving Lea County areas. These majors have staged a campaign for additional well connections within the past week after failing to fulfil their requirements in West Texas fields that share transportation room with Lea County producers in line outlets.

Lea County fields, except the Maljamar pool, are slated to receive the entire production increase. However, effective January 1, the allowable of the Monument field was boosted from 12,000 barrels to 22,000 barrels daily, according to Frank Vesely, State Land Commissioner and secretary of the Commission. This field has been restricted to 12,000 barrels daily since September 16, 1936, and during this period new wells cut the average yield per well from 88.7 barrels to 48.39 barrels daily. Production was pegged because the two pipe lines connected to the field limited their takings. The commission diverted the allowable due Monument field to other Lea County areas, which averaged 99 barrels daily per well during the last period in December, but will likely be cut back about 15 or 20 barrels daily in order to permit Monument operators to share proportionately in the market outlets.

Shell Pipe Line Corporation is nearing completion on a 6-inch line extension from the Eunice field to serve its own and outside connections at Monument. Gulf Refining Company, pipe line division, is reported to be enlarging its line into the field. A fourth trunk line connection is due to be announced next week.

A drive for well connections was underway last week by Humble Pipe Line Company, Atlantic Pipe Line Company and Shell Pipe Line Corporation in fields served by their respective lines. Lease connections "loaned" in 1933 were recalled by several of the companies.

Allowable production for New Mexico will exceed 100,000 barrels daily early in 1937. Sufficient drilling will occur within the next few months to force graduated boosts by the commission as an alternative against lowering the average well yield to a level that discourages drilling. Major purchasers indicate that they will absorb the increased supply.

State authorities have elected to ignore crude demand figures released by the Bureau of Mines for New Mexico each month for a long period, and in adopting the 92,800-barrel quota for January the Bureau's figures were exceeded by 13,000 barrels.

HENRY J. MORGAN, paleontologist for Atlantic Refining Company, has been transferred from Shreveport to Southwestern headquarters at Dallas.

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WEEKLY STAFF REPORT

Tulsa. — Continental Oil Company's Thompson 1, SW NW SE 2-1n-7e, in the main part of the Iesse field, and which has been receiving considerable attention during the past few weeks, was making 2,000,000 cubic feet of gas and a spray of oil while drilling during the early part of the week. The well later drilled to 4533 feet in the Bromide sand and made a flow of 365 barrels of oil the first 15 hours. Operators then drilled eight feet deeper to 4541 feet, and the well flowed 900 barrels of oil in four hours, while drilling. During the last 20 minutes, the well made 98 barrels of oil and 5,000,000 cubic feet of gas. Operators will run tubing and take potential.

Complete Fitts Wells

In the Fitts field, Carter Oil Company's Smith 10, NE NW SW 28-2n-7e, topped the Hunton lime at 3278 feet, and was acidized with 12,000 gallons at a total depth of 3546 feet. The well flowed 204 barrels of oil during the first hour through tubing, 142 barrels the second hour and 53 barrels of oil the third hour.

Shell Petroleum Corporation's Bates 1, SE NE NW 26-2n-7e, the most southeasterly drilling well in the field, was bottomed at 4345 feet with nothing showing. Observers stated findings in the well indicated the Hunton lime is dropping off in that direction.

Skelly Oil Company's Park College 14, NEc NW 28-2n-7e, was given a potential of 4461 barrels of oil, making the largest potential ever given a Hunton lime producer in the field to date.

Phillips Petroleum Company's Bates 2, NW NE NW 28-2n-7e, made a 24-hour potential of 2300 barrels of oil from the Hunton lime.

Mid-Continent Petroleum Corporation's McKoy 4, SW SE SW 20-2n-7e, flowed 270 barrels of oil in two hours and 45 minutes from the Viola lime at 4327 feet.

Magnolia Petroleum Corporation's Burris 10, SEc NE 28-2n-7e, flowed 514 barrels of oil in one hour through casing after being acidized with 10,000 gallons. Top of the Hunton lime was found at 3260 feet, and top of the Sylvan shale was had at 3562 feet.

A New Stroud Producer

Amerada Petroleum Corporation and Stanolind Oil & Gas Company's Peck 1, SEc NW 35-14n-6e, in the Stroud area of Lincoln County, had the first Wilcox sand from 4165 to 4172 feet, and the second Wilcox sand from 4185 to 4210 feet, and is said to be good for 200 barrels of 22 gravity oil a day. The oil is said to be excellent for use in the manufacture of road oil. It is being processed at a small plant near Stroud.

Sinclair Prairie Pipe Line Company is to lay a line from Avery station, near Tulsa, to the new Gubser pool, south of the Tulsa Municipal Airport, where a new Bartlesville sand area has been discovered. G. L. Coulter et al's Dougherty 1, NE NW NE 35-20n-13e, a direct south offset to E. H. Gubser's Fee 1, the discovery well, looks as though it will be completed for from 35 to 50 barrels of oil a day.

Fleetborn Oil Corporation's Tanner 1, NWc SE 28-17n-5e, southeast of Cushing in Lincoln County, made 3,000,000 cubic feet of gas and 45 barrels of oil through tubing. Depth of the well was 3994 feet after plugging back.

Tide Water Associated Oil Company's Hackett 1, NE NW SE 21-23n-2w, in the Billings pool of Noble County, received a potential of 2244 barrels of oil a day. The company has made location for Hackett 2, NWc SE 21-23n-2w, and will also start Aucutt 1, NEc SW 21-23n-2w.

Phillips Petroleum Company and Shell Petroleum Corporation were digging cellar and pits for Hackett 1, NW NE NE 21-23n-2w, and their McCaughtry 4, SW NE NE 21-23n-2w, was drilling ahead below 2,100 feet.

FIND NEW SAND

Tussy well may prove a different zone productive

Ardmore.—The most active spot in southern Oklahoma continues to be the new Tussy pool, located in both Garvin and Carter counties. Last week the discovery of a new sand was reported, but many of the wells in the new sector failed to make any show during the holidays.

The new sand, which is highly saturated, was found by Winkler & McQueen's Perkins 1, NWc SE 32-1n-3w, from 2198 to 2291 feet. The first six feet of the pay was drilled and the balance cored. Little gas was showing from the sand, but all expressed the opinion the sand will prove to be productive. Eight-inch casing was run to 2118 feet and plugs will be drilled at an early date.

New Tillman Show

Another pleasant surprise for oil men was word from Indian Territory Illuminating Oil Company and Foster Minerals Corporation's Hatler 1, SWc NE 32-2s-17w, south of Frederick in Tillman County, that a new oil show had been picked up. After coring from 4481 to 4484 feet, the recovery showed a good saturation with some gas. Another core has been ordered taken, and if it shows good, a drill stem test will be made. Field reports state the formation is turning from limestone to sandy lime.

Magnolia Petroleum Corporation's Gardner 1, CNE NE NW 34-6s-2e, in the Marietta area of Love County, was drilling ahead below 2763 feet with nothing showing.

Sinclair Prairie Oil Company's Stockton 1, SEc SW 26-6s-2w, in the Oswalt area of the same county, swabbed 40 barrels of oil on the latest gauge, and the crew was trying to swage collapsed casing. The casing trouble was the result of a nitroglycerine shot made early in December.

Ed. V. Parson's Olson 1, CSW SW 21-2n-8w, near Marlow in Stephens County, was shut down for orders at 7002 feet.

WILCAT SHOWING

Logan County test cores Wilcox formation

Oklahoma City.—Although the Oklahoma City field itself remained quiet, other parts of the sector showed signs of continued activity. Most important in the eyes of many oil men in the area and elsewhere is the test being drilled by Helmerich and Payne in Logan County, which topped Wilcox sand at around 6385 feet, and drilled ahead to 8389 feet, where a core revealed hard dry sand. Favorable showings had during the past few weeks have attracted much attention to Hasler 1, which is south of the Crescent pool. Operators were planning to core ahead.

Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Pfeiffer 5, C S½ S½ SW 33-20n-2w, in the Lucien pool of Logan County, topped the first Wilcox sand at 4865 feet and drilled to 4900 feet. Production was estimated at 309 barrels of oil in 22 hours.

New Moore Wells

The same interests' State 1, SEc SW 16-10n-2w, is a new producer in the north end of the Moore poole of Cleveland County. The well was flowing about 40 barrels of oil an hour through one-eighth inch choke and was making about 5,000,000 cubic feet of gas while testing. Later in the week, the well flowed 681 barrels of oil in 16½ hours. Production was coming from 7294 feet in the Wilcox sand.

Sinclair Prairie Oil Company's Fant-Meyers 1, SE NW NW 27-10n-2w, on the east side of the pool, was reported to have made 1283 barrels of oil in four hours. It was producing from the Wilcox sand from 7308 to 7320 feet.

Carter Oil Company and Gulf Oil Corporation's Miller 3, SW SE NW 28-17n-4w, in the Crescent pool of Logan County, averaged 171 barrels of oil an hour for five hours after being shot in the second Wilcox sand at 6313 feet.

Ohio Oil Company's Hathaway 3, NE SE NW 6-13n-3w, in the Edmond

pool of Oklahoma County, stopped at 6770 feet, and after being shot made 342.76 barrels of oil in one hour, and had approximately 4,500,000 cubic feet of gas.

Continental Oil Company's Young 14, NWc 31-14n-3w, stopped at 6699 feet and was making about 84 barrels of oil in two and one-half hours, natural.

In the Oklahoma City field, British American Oil Producing Company made location for Francis Heights 2, in block 2 of that addition, in the north end of the field.

Open Three Fields

RICE, RUSH AND KEARNEY GET NEW PRODUCTION

WEEKLY STAFF REPORT

OKLAHOMA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARTER COUNTY—		
Gulf et al, Johnson 8, sw sw sw 28-2s-3w	*	7497
CLEVELAND COUNTY—		
Anderson-Prichard, State 1, sw sw se 16-10n-1w ¶235	24,610	7254
Stanolind-Amerada, State Tract No. 6 1, se se sw 16-10n-2w	24,610	7294
Sinclair Prairie et al, Strauss 1, sw sw sw 22-10n-2w ¶66	30,064	7273
Denver Prod., Keller 1, nw nw ne 34-10n-2w (pb 7310) ¶1	165	7409
COAL COUNTY—		
Shell, Hill "A" 4, cnw 30-3n-10e	*	5902
COTTON COUNTY—		
Grace-Woods Drlg., Wilson 1, sw sw nw 17-4s-11w	*	4218
CREEK COUNTY—		
Gulf, McGuire 23, ne sw ne 1-18n-11e	50	2166
Indo Oil, Burgess 1-A, nw sw sw 30-18n-11e	20	1750
Mahaboc Oil, Ashe 1, sw sw nw 23-18n-8e	25	3207
Hughes, Fincher 1, se nw sw 11-19n-9e (otd 2158)	52	2391
GARVIN COUNTY—		
Cox & Hammon, Wallace 1, sw sw se 32-1n-3w (pb 2305)	100	2701
Winkler & McQueen, Davis 3, sw se se 32-1n-3w	40	2737
Davis 4, nw se se 32-1n-3w	35	2715
Carter Oil, Ivey 2, nw sw sw 33-1n-3w	175	2467
HUGHES COUNTY—		
Rogers O & G, Rogers 1, se sw sw 5-6n-8e	lcn	abd.
Texas Co. Aetna Life 1, cne nw 9e-8n-10e ¶8½		3192
Stanolind-Amerada, Harris "D" 1, sw nw ne 8-6n-8e	*	4420
Young et al, Tims 1-A, nw se ne 11-9n-9e	*	1568
JEFFERSON COUNTY—		
Bridwell, Wohlgemuth 7, sw sw nw 30-6s-5w	25	1529
KAY COUNTY—		
Kansas Oklahoma O & G, Wolf 1-A, cne sw 6-28n-1e	*	3237
LINCOLN COUNTY—		
Kemp et al, Stites 1, nw nw nw 28-17n-5e	*	4179
MARSHALL COUNTY—		
Leavell Coal, Brent 10, se ne se 1-8s-5e	*	545
NOBLE COUNTY—		
Shell Community, Moelling 1, csw nw 31-21n-2w ¶4	4848	5389
OKFUSKEE COUNTY—		
Chapman et al, Brunner 2, ne nw se 25-10n-8e	3939	1780
Chapman Cudjo 7, ne sw se 25-10n-8e	987	1761
Manahan Oil, Black 3, ne ne se 25-10n-8e	1002	1774
Blackwell, Dolton 10, nw nw ne 36-10n-8e	340	1747
Blackstock, Dolton 12, sw nw ne 36-10n-8e	325	1747
Evine, Smith 1, ne ne nw 36-10n-8e	368	1745
Oklahoma Oil Corp., Dawley 1, nw nw se 8-10n-9e	*	1886
Chapman & Atlantic, Natchee 4, nw sw se 19-10n-9e	2	1787
Chapman, Williams 1, sw sw nw 30-10n-9e	739	1760
Fleming, Pincham 7, sw se se 2-10n-11e	5	1660
OKLAHOMA COUNTY—		
Rosemary Oil, Long 1, nw sw sw 7-11n-2w	48	5541

Wichita, Kansas.—Highlight of drilling activity in Kansas last week was the opening of three new pools, and the linking together of the Hauschild and Saxman fields of Rice County. Other items of interest included a new Siliceous lime producer in the St. John pool of Stafford County, the completion of the biggest well yet to be drilled in the Silica field of Rice and Barton Counties, and the bringing in of a producer having the highest gravity crude so far found in central Kansas.

A new pool for Rice County appears to have been opened by Shell Petroleum Corporation's Soeken 1, C NW 10-19s-9w, northeast of Chase, which was showing for a producer from the Kansas City lime at 2921 feet. Soeken 1, originally drilled to the Siliceous lime, proved to be dry in the formation, and was plugged back to the Kansas City lime. On initial tests, the well swabbed 50 barrels of oil an hour with some water. The production followed acid treatment with 1000 gallons. Pumping equipment was being installed preparatory to taking potential.

Company, Well and Location	Init. Prod. Bbls.	Depth
British-American, Francis 1, sw se sw 22-12n-3w	3257	6510
Clark & Co., Nuffsinger 1, sw nw nw 23-12n-3w ¶6	1165	6493
Slick, Urschel & Sinclair Prairie, Belle McGraw 1, sw se sw 20-13n-3w ¶5⅛	1496	6680
OKMULGEE COUNTY—		
Pine, Bruner 1, csl sw nw 4-15n-14e	*	2285
Dodge, Herrod 11, ne ne se 17-15n-14e	*	885
OSAGE COUNTY—		
Bay Oil, 3, cs½ sw nw 25-22n-7e	25	2914
Midco Oil, 13, se se se 18-22n-10e (otd 1950) (pb 2015) ¶1½	15	2025
Link Oil, 9, sw nw ne 4-22n-12e (otd 1445)	15	1661
Coralena Oil, 1, sw sw sw 13-24n-7e	*	2502
Lewis & Continental 17, sw sw sw 16-24n-7e,	270	2677
Carter Oil, 4, se ne se 34-26n-6e	122	2903
PONTOTOC COUNTY—		
Blackstock, Moody 5, sw nw sw 23-2n-7e	826	4391
Sinclair Prairie, Burris 15, ne nw nw 27-2n-7e	4091	3525
Fleetborn, Wooley 3-A, nw ne se 28-2n-7e ¶3¾	3288	3518
Boetcher O & G, Starrett 5, ne ne se 23-4n-7e	27	1736
Campbell et al, Northam 1, nw nw se 30-5n-5e	20	2561
Caprock, Layne 5, ne nw nw 30-5n-5e (pb 2320)	10	2897
Benedum & Trees, Kocker 4, ne nw nw 31-5n-5e	15	2648
Sinclair Prairie, Ralls 11, se ne sw 28-5n-8e	25	850
POTTAWATOMIE COUNTY—		
Nuckles, Wyatt 1, se ne nw 10-7n-4e (pb 4067)	90	4397
SEMINOLE COUNTY—		
Exchange Drlg et al, Carolina 1, nw se ne 8-6n-7e (pb 4038)	*	4040
Wood Oil, Ashley 2, se ne nw 22-7n-5e	40	4140
Murphy, Mayhue 1, ne nw nw 14-9n-6e (otd 3913)	283	4120
Carter et al, Sanford 3, nw ne se 16-9n-6e (pb 3580)	16	3605
Magnolia, Browning 5, cw½ sw nw 14-10n-6e (otd 4182) (pb 4184)	787	4187
C. J. Wrightsman, May 1, se sw sw 25-10n-7e ¶3	600	3640
STEPHENS COUNTY—		
Raizen Bros, Price 7, nw se sw 10-3s-5w	4	1459
Price 8, nw se sw 10-3s-5w	3	512
TULSA COUNTY—		
Bowder, Haikey 5, nw sw sw 33-18n 14e	*	1554

*Failures; †Junked; ¶Million cu. ft. gas.

New Rush County Field

Schoenfeld and Kitch's Winget 1, SEc 15-16s-16w, some eight miles due north and one mile west of the Otis gas field of Rush County, western Kansas, apparently opened a new oil pool. The well topped Kansas City lime between 3245 and 3247 feet, and filled up 900 feet the first 50 minutes, and reached 1000 feet at the end of the first hour. By noon of the following day, the oil had filled the hole some 1800 feet. Operators were preparing to reduce the hole and make a test.

In the Raymond sector of Rice County, Rosespring Drilling Company's Mantel 1, SW SE NE 18-20s-10w, pumped 418 barrels of oil from the Siliceous lime and was to be acidized. Operators in the area state the well looks like the discoverer of a new pool. If successfully completed it will be the eleventh strike for Rice County this year.

The well which has established the link between the Hauschild and Saxman pools of Rice County is R. W. Sage and L. E. Douglas' Theede 1, NWc SW 9-21s-7w, mid-way between the two pools and about one mile northeast of Joe Aylward's Johnson 1, a wildcat producer in that same area. The new producer topped the conglomerate at 3360 feet, and began flowing after drilling to 3370 feet. It flowed 600 barrels of oil in six hours, establishing a basis for the potential which has not yet been announced.

Big Silica Producer

Rice County continued to stay on top with the best news with the report that Mid-Continent Petroleum Corporation has the biggest producer ever drilled in the Silica pool, which extends into both Rice and Barton Counties. Completion of a 60-day retest at its Risse 6, NEc SE 6-20s-10w, at the southeast edge of the pool, was reported as being 3001 barrels of oil in 24 hours. Production was from the Siliceous lime at an approximate depth

of 3300 feet. The well was originally completed for about 2450 barrels of oil two months ago, following acidization.

Prior to the retest of Risse 6, seven producers in the Risse lease had a combined potential of 12,819 barrels of oil, one of the best averages in the pool. Its Matzek lease, on the Barton County side of the pool, has nine producers with a combined potential of 14,890 barrels of oil.

Stanolind Oil & Gas Company's Specht 8, in the same section, formerly the outstanding producer for the area, was completed less than a month ago for a potential of 2644 barrels of oil. The other 106 producers in the pool combine to make a potential of 250,000 barrels of oil, making the pool the largest in the state.

In Saline County, Brouk and Murphy's Tehlander 1, NE NW SE 10-16s-3w, near Salina, which had a hole full of water in both the Wilcox sand and the Siliceous lime, plugged back to retest the Viola lime. Five-inch casing was set at 3289 feet, and afterward the well was bailed down and left to stand for 48 hours. During that time, the well filled 1000 feet with oil. Operators plan to acidize the Viola lime before completing the well.

Trapp Field Extended

Extending production two locations to the south, Phillips Petroleum Company's Hoffman 1, SEc 31-15s-13w, in the Trapp pool of Russell County, pumped 688 barrels of oil in 24 hours, while bottomed at 3322 feet in the Siliceous lime. It is the initial producer for the Phillips Company in the pool.

Second Siliceous Lime Well

Lario Oil & Gas Company appears to have given the St. John pool of Stafford County its second Siliceous lime producer. The new well is Morgan 1, NWc SE 23-24s-13w, and is a southeast diagonal offset to the discovery well. The hole filled within 200 feet of the top of the casing with oil in a short time after tools began drilling out the plug at 4064 feet, in the top of the lime. Company officials said the plug would be drilled out to the bottom of the hole, which was at 4083 feet, before a production test would be made. Later reports stated the well had started a pumping test after swabbing about 60 barrels of oil an hour.

58 Gravity Crude

The well which had the highest gravity oil for the central part of the state is George P. Dickey et al's Goering 1, SEc 17-21s-1w, in the Graber pool, which was flowing about 15 barrels of 58-gravity crude oil, accompanied by from 3,000,000 to 4,000,000 cubic feet of gas. Although the high gravity oil is coming from the chat, the well is alleged to be good for about 1290 barrels of oil daily from the Hunton lime, the horizon from which other wells in the pool are producing.

New Kearney County Field

Joe Murphy and J. P. Curran's Campbell 1, NWc SW 32-25s-35w, apparently have opened up a new pool, as the well began showing for 1,400,000 cubic feet of gas from around 2750 feet. The test, south of Lakin in Kearney County, is some miles north of the big Hugoton gas field.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARBER COUNTY—		
Sinclair Prairie, Gentry 1, ne ne ne 1-33s-15w (pb 4792)	*	5529
BARTON COUNTY—		
Price et al, Deutsch 1, nw nw ne 16-16s-13w	939	3390
Armar and Vernon, Ainsworth 1, ne ne se 33-16s-13w	1241	3395
Republic Nat. Gas, Bloomer 4, sw se nw 36-17s-11w	914	3300
Skelly, Bloomer 5, nw se ne 36-17s-11w	2713	3275
Bloomer 6, sw se ne 36-17s-11w	2733	3273
I. T. I. O., Peters 1, cn½ s½ nw 24-20s-11w	1964	3258
Atlantic, Asher 1, cne nw 31-20s-13w	11,000	3269
BUTLER COUNTY—		
Empire & Lathrop, Lathrop 23, nw ew nw 17-23s-4e	340	2103
Ohio Fuel Supply, Jacobs 4, cse nw 6-25s-4e	68	2676
CHAUTAUQUA COUNTY—		
H. N. Holliday, Holliday 21-A, cne nw 23-32s-12e	*	1842
Denman Bros., Shick 5, ne ne nw 14-33s-12e	*	1825
COFFEY COUNTY—		
Spencer et al, McLean 2, se sw sw 12-23s-14e	20	1613
COWLEY COUNTY—		
Trees Oil, Pierson 1, sw ne ne 19-30s-4e (pb 2859)	50	2893
Home Natural Gas & McNish, Warner 2, se se sw 31-32s-6e (pb 1900)	¶2½	3190
ELLIS COUNTY—		
Phillips, Bemis 3, ne sw ne 21-11s-17w	356	3389
GREENWOOD COUNTY—		
Ohio Oil Co., Pixlee 7, se sw nw 8-22s-10e	*	2477
HARVEY COUNTY—		
Inca Prod., Moore 1, cne ne 26-24s-3w	*	3091
MARION COUNTY—		
Western Kansas O&R, Houser 1, sw sw sw 19-19s-4e	*	2644
McPHERSON COUNTY—		
Continental, Chaves 1, ne nw ne 20-21s-1w	71	3359
Hetzke 3, nw sw se 20-21s-1w	1158	3329
RENO COUNTY—		
Magnolia, Harris 3, sw sw nw 9-26s-4w	1364	4051
RICE COUNTY—		
Ohio Oil, Wilcox 1, nw nw sw 18-19s-9w	1144	3283
Torry & Feaster et al, Purcell 1, sw sw ne 32-19s-9w	1079	3244
Shell, Bayer 1, sw sw se 29-19s-10w	35	3292
Charles Pet., Speck 1, nw nw se 29-20s-8w	*	3672
Sinclair Prairie, Proffitt 2, sw nw nw 3-20s-10w	559	3343
Tatlock, Berscheidt "A" 2, nw sw sw 6-20s-10w	1733	3274
Berscheidt "B" 2, nw nw sw 6-20s-10w	2019	3284
Douglas et al, Patton 1, sw sw sw 5-21s-7w (otd 3342)	1560	3366
Derby Oil, Hauschild 4 se sw sw 11-21s-7w	2657	3406
Aylward Prod., Johnson 1, nw nw ne 17-21s-7w	2818	3390
RUSH COUNTY—		
Morgan & Flynn, Schroeder 1, sw nw se 23-18s-16w	¶44 1292	3538
RUSSELL COUNTY—		
Hartman & Blair, Harbaugh 4, se se sw 25-14s-15w	534	3177
Coralena Oil, Trapp 15, ne nw se 30-15s-13w	2797	3258
Shell, Michaelis 3, nw sw ne 31-15s-13w	2342	3250
STAFFORD COUNTY—		
C. E. Skiles Leidigh 1, nw nw sw 21-22s-11w	*	3653
Stanolind et al, Heyer "A" 3, sw ne nw 31-22s-11w	lcn	abd.
Stanolind, Heyer "B" 5, se ne ne 31-22s-11w	1450	3546
WOODSON COUNTY—		
Alexander & Bell, Haas 2, sw se se 22-23s-14e	200	1632
Cross et al, Mason 5, se ne sw 14-25s-13e	3	1479

*Failures; †Junked; ¶Million cu. ft. gas.

Lea Stays Active

MONUMENT EDGE WELLS SHOW LIMIT NOT REACHED

WEEKLY STAFF REPORT

Hobbs, N. M.—Lea County maintained its large volume of field activity by adding 14 locations and 15 completions, including a gasser and dry hole, the past week. Monument field held the spotlight with another big natural producer, and gained six locations while completing seven producers.

Anderson-Prichard Production Corporation set the pace on new production in completing H. M. Britt-Conoco 6-A, C SE SW 7-20s-37e, flowing 420 barrels of oil per hour through ¾-inch choke on 7-inch casing with 3-inch drill pipe suspended in the hole. It was drilled to 3856 feet, or 300 feet below sea level. This company's Britt-Conoco 5-A, a north offset, was brought in the previous week flowing 650 barrels per hour and 7,500,000 feet of gas daily through 7-inch casing, and later gauged 176 barrels per hour for 3 hours on ¾-inch tubing choke. Barnsdall Oil Company is starting west offsets.

Edge wells completed at Monument reveal that the production limits have not been defined, except by two dry holes on the east flank of the structure. Continental Oil Company et al's A. U. Sanderson 1-B-10, C E½ NE NE 10-20s-36e, flowed 20 barrels per hours on ¾-inch tubing choke from lime at 3900 feet, or 300 feet sub-sea. Gas volume was rated at 2,000,000 feet daily. In the northeast area, Humble Oil & Refining Company's State 1-E, C NW SW 21-19s-37e, gauged 34 barrels oil per hour for 8 hours after using acid twice at 3985 feet. Amerada Petroleum Corporation's State 7-T, C NW SW 28-19s-

37e, flowed 24 barrels per hour after using acid twice at 3954 feet, or 320 feet sub-sea. The latter awarded contracts for the drilling of T. Anderson 2, C SE SW 8-20s-37e; Mary Love 1, C NW SE 32-19s-37e; State 1-W, C SE NE 30-20s-37e; and State 2-W, C SW NE 30-20s-37e.

East Flank Test

Repollo Oil Company's Bordages 2-A, SW SE SW 21-19s-37e, east flank test, swabbed dry after using 3000 gallons of acid at 3982 feet, or 350 feet below sea level. It is ¾-mile northwest of a failure. Ohio Oil Company is starting operations on Barber 8, C SW NW 5-20s-37e, and Laughlin 1, C SW NW 9-20s-37e. Empire Oil & Refining Company's D. L. Laughlin 4, C NE NE 8-20s-37e, was included in the new locations. The Texas Company's J. W. Cooper 4, C SE NE 5-20s-37e, flowed 53 barrels per hour, with 2 percent bs & w, through open tubing at 3889 feet. The gas/oil ratio was 580/1. Gulf Oil Corporation's State-Graham 1-G, C SW SE 17-19s-37e, northeast outpost, failed to make its allowable after using acid twice at 3995 feet, or 325 feet sub-sea, and is cleaning out cavings from 320-quart nitro shot at 3867-3995 feet.

Considerable new work is likely to occur between the Henry and Eunice lime fields as result of the recent completion of Continental Oil Company et al's Ira C. Farney 1-A-5, C SW SE 5-23s-36e, flowing 38 barrels of 32 gravity oil per hour on ¾-inch tubing choke from lime at 3760 feet, or 303 feet sub-sea. It is 2 miles north by west of nearest production. Top of the oil section was not definitely established, as the entire section drilled hard lime, and when the well made a favorable showing on drill-stem test it exceeded expectations. Continental Oil Company et al's Rex Williams 1, C SW SW 27-23s-35e, wildcat, tested 4000 feet of water when formation tester was used in lime at 4083-4130 feet, with an elevation of 3428 feet. The hole has been plugged.

Continental Oil Company et al's A. E. Meyer 17-B-4, lot 1, 4-21s-36e northeast edge of the Eunice field, flowed 32 barrels oil per hour on tubing choke after 180 quart nitro shot at 3732-3832 feet. Geo. F. Getty Oil Company's State 1-D, C SE NE 32-30s-37e, is reported to be showing a little water with an oil yield of 2½ barrels per hour after nitro shot and acid treatment at 3860 feet, or 321 feet sub-sea. New locations for the Eunice field includes Mid-Continent Petroleum Corporation's H. D. Greer 1, C NE NW 21-22s-36e, and Ohio Oil Company's State-McDonald 5, C SE NW 16-22s-36e, both offsetting production in the south end.

Federal permits are involved in two new locations staked for the South Jal field. The Texas Company, Amerada Petroleum Corporation and Columbian Carbon Company's C. W. Shepherd 3-A, SW NE NE 5-26s-37e, invades semi-wildcat territory. Continental Oil Company et al's Eaves 3-A-19, located 660 feet from west and 2310 feet from south lines 19-26s-37e, has started operations.

The Texas Company is seeking an extension of more than a mile for the North Eunice pool in starting operations on J. P. Alexander 1, Lot 14, 5-21s-37e.

Important Extensions

WEST TEXAS PERMIAN AREA CLOSES GOOD YEAR IN RUSH

WEEKLY STAFF REPORT

Midland, Texas.—Important production extensions for Upton, Ector and Andrews Counties marked the concluding week of an unusually active year for the Permian Basin section of West Texas. Prospects for a new pool in the McCamey district, Upton County, looked promising as result of R. H. Henderson, Midland, et al's A. A. Reese 1, NEc NW Section 16, Block 3½, CCS-DRG & NG Ry. Survey, testing 5 barrels of free oil when drilled to 2880 feet. First oil and gas saturation appeared in dolomite lime at 2750-2760 feet, and 2780-2847 feet, with better porosity showing at 2880 feet. It is three miles northeast of nearest production, and is expected to respond favorably to acid treatment.

Andrews County's bid for a new oil area rests upon the outcome of Sinclair Prairie Oil Company's Emma Cowden 1, SEc Section 12, Block 44, T&P Ry. Survey, T-1-N, 2½ miles northwest of small producers on the Holt tract in Ector County. Cowden 1 swabbed 3 barrels of oil in 18 hours when tested in lime at 4300 feet, or 1165 feet below sea level. Results of a 330-quart nitro shot have not been ascertained, as a bridge formed in the casing, and the well did not clean itself.

Foster Extension

Expansion of the Foster field, Ector County, 1 1/3 miles to the northeast took place early last week when York & Harper, Inc. and The Sloan & Zook Company's H. C. Foster 1-B, SW SW SW Section 8, Block 42, T&P Ry. Survey, T-2-S, filled 1000 feet with oil from saturated lime logged at 4182-4210 feet. Pay was topped at 1237 feet below sea level, or about 35 feet lower structurally than one of the nearest flowing wells. This outpost will be deepened, then use nitroglycerin. Texas Pacific Coal & Oil Company's Clarence Scharbauer 1, NEc Section 31, situated on a direct strike between the original Goldsmith field, Ector County, and the northwest extension area, gauged 864 barrels oil and 2,000,000 feet of gas during first 24 hours after drilling lime pay at 4165-4215 feet. It is the largest natural producer outside the main field, and will be acidized. Shasta Oil Company and Cordova Union Oil Corporation's Scharbauer 1, SWc NW¼ Section 29, flowed 540 barrels initial after 100-quart shot at 4147-4202 feet, and was awaiting acid treatment late last week. Devonian Oil Company's Scharbauer 1, SWc SE Section 34, one mile east of production, bridged after shooting lime at 4165-4208 feet with 150 quarts of nitro. This well encountered sulphur water at 4219-4225 feet, and plugged back to 4214 feet, or 1067 feet below sea level.

John I. Moore, et al's T. C. Barnsley 1, Crane County wildcat, halted operations at 6500 feet, contracted depth, early last week after drilling more than 200 feet into the Simpson, or upper Ordovician lime series, without showing oil or gas. Ohio Oil Company's Goode 1, northeastern Terrell County Ordovician test, was drilling in black shale and sand at 7665 feet, according to late reports.

Sulphur Water in Henderson Field

Sinclair Prairie Oil Company's Fred Leck 6-A, NW NE SE Section 33. Block 74, inside location for the west flank of the Henderson field, Winkler County, gauged 603 barrels of oil and 151 barrels of sulphur water on initial test through open tubing from dolomite lime at 3100 feet. Appearance of this water indicates that oil and gas drainage is beginning to pull in the water, a natural trend for this reef type

NEW MEXICO

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Eunice Field)—		
Conoco and California Co. et al, Meyer 17-B-4, lot 1, 4-21s-36e	1500	3832
Gulf Oil Corp., State-Bell 2-D, c sw sw 6-21s-36e	804	3888
State-Orcutt 3-C, lot 7, 6-21s-36e	495	3862
Humble, State-Aggies 7, c nw ne 31-20s-37e	300	3835
LEA COUNTY (East Jal Field)—		
Argo Royalty Co., B. T. Lanehart 1, sw sw ne 21-25s-37e	¶5	3782
LEA COUNTY (Maljamar Field)—		
Maljamar O&G Corp., Baish 7, c se nw 21-17s-32e	80	2362
LEA COUNTY (Monument Field)—		
Amerada Pet. Corp., State 7-T, c nw sw 28-19s-37e	600	3954
Anderson-Prichard Prod. Corp., Britt-Conoco 6-A-7, c se sw 7-20s-37e	15,000	3857
Conoco-California-Atlantic, Sanderson 1-B-10, c e½ ne ne 10-20s-36e	750	3900
Empire O&R Co., D. L. Laughlin 3, c se se 5-20s-37e	5000	3895
Humble, State 1-E, c nw sw 21-19s-37e	750	3985
Phillips Pet. Co., Britt-Conoco 1, c ne sw 18-20s-37e	1500	3870
The Texas Co., J. W. Cooper 4, c se ne 5-20s-37e	1200	3889
LEA COUNTY (Wildcats)—		
Conoco, California, Stanolind & Atlantic, I. C. Farney 1-A-5, c sw se 5-23s-36e	2500	3760
Conoco & California Co., Rex Williams 1, c sw sw 27-23s-35e	*	4130

*Failures; †Junked; ¶Million cu. ft. gas.

of structure. Other wells in the area that occupy a lower structural position have been completed without showing water. Recently Humble Oil & Refining Company's J. B. Walton 8-C, NW SW NW Section 34, developed the first bottom hole water in the north portion of the field with a natural flow of 536 barrels net oil with 43 percent bs&w at 3054 feet, or 172 feet sub-sea. The latter occupies a high structural position.

The east flank of the Sayre field, Winkler County, contributed two large gas wells and an unusually large oil producer the past week. Humble Oil & Refining Company's J. T. Howe 19, SEc Section 12, Block 26, blew out drill pipe at 2900 feet, causing considerable damage to the derrick. Magnolia Petroleum Company's J. B. Walton 49, NWc Section 15, a southeast offset, picked up the big gas production at 2834 feet,

WEST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ECTOR COUNTY (Judkins Field)—		
Gulf Oil Corp., W. E. Connell 10-B	406	3700
Shell Oil Corp., University 1	217	3660
FISHER COUNTY—		
Gen'l Crude Oil Co., B. F. Willingham 6	740	3119
GARZA COUNTY—		
Grisham-Hunter Corp., Post Est. 1	†	2410
GLASSCOCK COUNTY (Wildcat)—		
John I. Moore et al, L. S. McDowell-I. T. I. O. 1, sec 31	*	2522
HOWARD COUNTY—		
Magnolia, G. O. Chalk 5	307	2976
JONES COUNTY—		
Danciger O&R Co., Fortex & Owens-Snebold Oil Corp., Dorsey 3	100	2236
Ungren & Frazier, Wirt Davis-Stemmons 1	*	2047
H. Dorsey 8-C	850	2146
H. Dorsey 10-C	1000	2212
PECOS COUNTY (Torborg Field)—		
Cardinal Oil Co., Tippett-Kirby 44-E	4	1420
Paul Childress, Tr., M. A. Smith-Sinclair 12	39	400
PECOS COUNTY (Yates Field)—		
Cardinal Oil Co., M. A. Smith 2-C	72	1705
UPTON COUNTY (McCamey Field)—		
Cordova Union Oil Corp., Fee 1, sec 2	290	2200
J. W. Ellis et al, J. W. Robbins 6-B	776	2255
A. R. Eppenauer Drl. Co., J. M. Perry-Texas Co. 2	71	2087
WARD COUNTY—		
Gulf Oil Corp., Hutchings 62	1130	2752
Merry Bros. & Perini, Inc., Hathaway 1	3347	2615
Republic Prod. Co., C. R. Fox 5	158	2313
Sinclair Prairie, F. Carnegie 3-A	40	2323
Tide Water Associated, W. D. Johnson 3	583	2622
WINKLER COUNTY (Brown-Altman Field)—		
Atlantic Ref. Co., E. G. Hutchings 3	¶40	3040
Magnolia, N. R. Colby 6	191	3144
WINKLER COUNTY (Emperor Field)—		
Bert Fields et al, E. W. Cowden-Pure 1-D	277	3100
WINKLER COUNTY (Henderson Field)—		
Humble, J. B. Walton 8-C	1500	3054
Joe C. Maxwell, Inc., L. Daugherty 2	711	3098
Sinclair Prairie, Fred Leck 6-A	603	3100
Uscan Oil Co., L. Daugherty 2	1500	3104
WINKLER COUNTY (Sayre Field)—		
Harry Adams et al, J. B. Walton 6-A	485	3100
Magnolia, J. B. Walton 47	977	2966
J. B. Walton 48	445	2977
W. L. & E. J. McCurdy, McCutcheon-Pure 4	752	2980
Navarro Oil Co., C. C. Crenshaw 4	1150	3133
Sinclair Prairie, J. B. Walton 6-C	1305	2975
J. B. Walton 8-C	1121	2975
J. B. Walton 9-C	3600	2980
Sheil, T. G. Hendrick 7-J	1786	3082

*Failures; †Junked; ¶Million cu. ft. gas.

and was estimated at 30,000,000 feet of gas and 91 barrels oil daily. Sinclair Prairie Oil Company's J. B. Walton 9-C, NE NW NE Section 24, responded to 130-quart nitro shot in sandy-lime at 2850-2980 feet with a flow of 1731 barrels oil in 11 hours through casing. Gas volume was estimated at 6,390,000 feet daily. In the Brown-Altman field, Atlantic Refining Company's E. G. Hutchings 3, SE SE SW Section 47, tested 40,000,000 feet of gas after 450-quart nitro shot at 2800-3040 feet.

Seminole Discovery Cleans Itself

Amerada Petroleum Corporation et al's S. J. Averitt 1-A, discovery oil well for the Seminole structure, Gaines County, finished cleaning itself of drilling fluid and flowed 189 barrels of oil and 1,202,000 feet of gas on 1-inch tubing choke during a 24-hour period ending December 31. Tubing pressure was 80 pounds, and closed in casing pressure 450 pounds. On the previous day the well flowed 194 barrels fluid, with 2 percent drilling water. This well plugged back from bottom hole water at 5054 feet, or 1736 feet sub-sea, to 5032 feet, and cemented a string of 5½-inch pipe at 4980 feet to cut off dry gas found above the first oil pay at 4996 feet. The well will produce more oil under choke than will be permitted under proration and at the same time yield sufficient gas to supply fuel for offsets due to be started up early this year.

A protection string of 7-inch pipe has been cemented at 4503 feet by Amerada Petroleum Corporation's C. E. Robbins 1, C NW NW Section 9, Block A-22, PSL Survey, southern Gaines County. It is about 1¼ miles south of a small wildcat producer completed earlier this year by Landreth Production Corporation on the Kirk tract. Stanolind Oil & Gas Company's J. A. Morrow 1, near C SW¼ Section 20, Block A-24, about 4 miles west by north of Kirk 1, was drilling below 4650 feet, and occupies a more favorable structural position than either of the above two tests.

LOOKS GOOD

Cooke County wildcat showing in Strawn sand

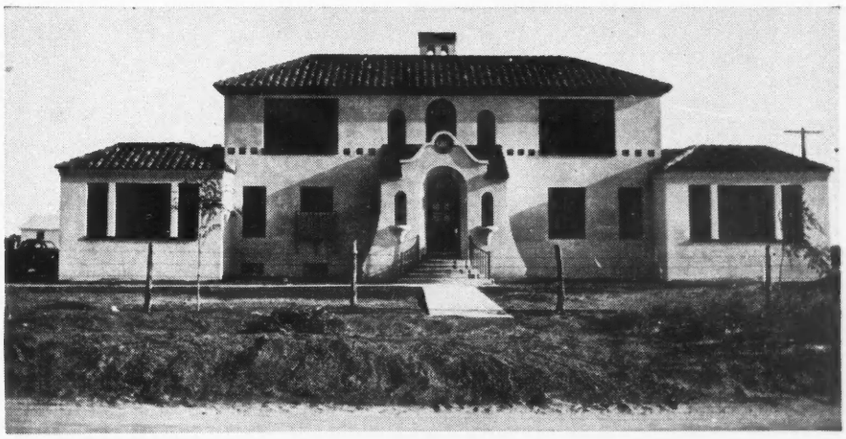
Wichita Falls, Texas.—Cooke County's bid for a new oil strike from the lower Strawn sand series and similar to the pay zone in the Bruhlmeyer field looked favorable last week when Joe A. Worsham et al's J. S. Clark 1,

NORTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
L. T. Burns et al, J. J. Perkins-Conoco 1-D	*	1655
Burns & Long, L. Wilson 3-T, sec 75	100	2216
H. H. Fraser et al, L. F. Wilson 13-B, blk 19	*	900
T. G. McCurdy et al, M. F. Martin 1	25	981
O. R. Tautenhahn et al, Parrish Bros. 2, blk 110	*	1210
The Texas Co., G. B. Hamilton 1, blk 5	*	1398
JACK COUNTY—		
Bennett Pet. Corp., W. Chambers 3	1000	2985
Hamilton Pet. Co., A. Kuykendall 2	315	2376
Hammon & Meredith, F. Rhodes 2	406	2427
Hill & Hill, R. H. Eatherly 2	515	2992
Thos. D. Humphrey, J. Birdwell 8	261	3062
B. F. Rankin 6	75	3005
B. F. Rankin 7	387	3003
H. S. Moss et al, Lowe-Eatherly 2	492	3016
O. J. Perrin et al, J. R. Clayton 1	450	3000
MONTAGUE COUNTY—		
Continental Oil Co., N. J. Howard 20-A	15	1377
WICHITA COUNTY—		
Coleman & Coppock, G. R. Hodge 7, blk 39	*	100
Culbertson Co., Waggoner Bros. 80, sec 13	30	1366
King Oil Co., Waggoner Est. 3-I	40	1849
Geo. Proctor et al, Foster-Allen 2-A, sec 1	91	1101
Reno Oil Co., Waggoner Est. 2-D	*	2006
WILBARGER COUNTY—		
W. I. Wilson Oil Co., J. J. Mulloy 2, sec 4	*	640
YOUNG COUNTY—		
Paul Atchley et al, J. K. Thomas 1, sec 155	*	1071
J. W. Eagleston et al, S. O. Wall 1	*	600
Piper & Wilson, S. L. Scott 2, sec 334	30	749
O. G. Turner et al, Mrs. M. L. Cross 1, sec 1993	*	638
White & Duncan, Prideaux 4-A	10	785

*Failures; †Junked; ¶Million cu. ft. gas.



Sand storms and extreme summer temperatures will not interfere with the office routine at the West Texas district headquarters building, pictured above, recently completed by Gulf Oil Corporation at Odessa. The structure cost about $35,000, and is air-conditioned. It houses the office personnel of the production department, with F. D. Hatfield, superintendent in charge, and also that of Gulf Refining Company, pipe line division. Grounds have since been landscaped and beautified with flowers and shrubbery.

near southeast corner of the William Campbell Survey A-238, logged favorable saturation at 2238-2254 feet. Casing has been cemented on top of the sand, and production test is slated to be made early this week, according to Worsham. Considerable trading in leases and royalty interests have followed, with Worsham paying competitive prices for additional protection.

The Clark prospect was drilled on geology worked by M. M. Garrett, Dallas consulting geologist, and the owners have about 600 acres under lease in the area. It is four miles southeast of the Bruhlmeyer field. C. Newburn et al's Dotson-Winton 1, located in the southwest part of the Campbell Survey and 4600 feet west of Clark 1 logged favorable oil saturation at 2093-2100 feet, but tested salt water with a minor oil showing, and sandy-lime section from 2100-2132 feet carried oil odor, but no free oil. This wildcat was abandoned early in December.

Sinclair Prairie Oil Company and Sunray Oil Company's McCall 2, Cooke County's record depth test for the district, was drilling in sandy-lime at 8300 feet, according to late reports.

TEXAS PANHANDLE

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Gulf Oil Corp., E. Cooper 16	639	3069
GRAY COUNTY—		
Dolomite Production Co., Sailor 2	688	3255
Kewanee O&G Co., R. Arnold-Morgan 9	683	3268
Stanolind et al, L. Holmes 5	37	3542
The Texas Co., C. S. Barrett 6	563	3253
HUTCHINSON COUNTY—		
Danube Oil Corp., W. A. Starnes 1	837	3180
Drilling & Exploration, Inc., Watkins 8	610	2990
The Texas Co., C. R. Garner 8-A	554	3060
J. W. Moore 5	541	3143
WHEELER COUNTY—		
Smith Bros. Ref. Co., Johnson 7	¶3.8	2550

*Failures; †Junked; ¶Million cu. ft. gas.

Curtailment Looms

TALCO HAS TRANSPORTATION AND MARKETING PROBLEMS

EAST TEXAS

WEEKLY STAFF REPORT

Mount Pleasant, Texas.—Talco field entered the new year with prospects of further curtailment of crude production because of transportation and marketing difficulties.

Production averaged 13,250 barrels daily from 166 flowing and pumping wells during the week ending December 28, and a major portion of this prorated oil was being diverted to storage within the field. Humble Pipe Line Company, owner of an 8-inch trunk line that extends to Longview, where connection is made with a 10-inch carrier in making deliveries to the Baton Rouge plant of Standard Oil Company of Louisiana, is credited with storing about 3500 barrels of Talco crude daily in two 55,000-barrel tanks near the field. This oil is backing up because the company's trunk line has failed to attain the anticipated capacity after erecting booster stations at intervals of 16 miles.

Heaters May Help

Some relief from the transportation problem arising from the handling of Talco heavy oil is expected to follow the installation of heaters in each of the four mainline stations. Humble Pipe Line Company has experienced a number of pipe line breaks between Talco and Longview because of high pressures brought into play in trying to maintain normal runs. With colder weather due within the next two months, the outlook is not encouraging for this company to be able to serve its well connections without erecting more storage in the field. This Talco trunk line outlet was completed and placed in service on October 1, 1936, averaging 350 barrels per hour, but cold weather cut the volume to 175 barrels hourly with one station then in operation. Soil covering the buried line has not packed sufficiently to prevent rainwater from seeping through to chill the oil in the line.

A similar transportation problem was experienced in the Texas Panhandle during the first winter that trunk lines were operated, but after the soil packed around the buried line the pumping difficulties disappeared.

Talco crude is sluggish, with a mixed paraffin and asphalt base, and varies from 14 to 24 gravity. The lower grade is largely confined to the southwest extension area. Water encroachment into a big portion of the field has been followed by a noticeable decline in the gravity of the oil.

Talco Pipe Line Company, Dallas, second largest purchaser and transporter of crude for the area, has been storing the bulk of its current runs in large tanks near Talco. This concern is due to start making deliveries to a second tank farm nearing completion at Mount Pleasant, where an affiliated company proposes to erect a crude cracking plant.

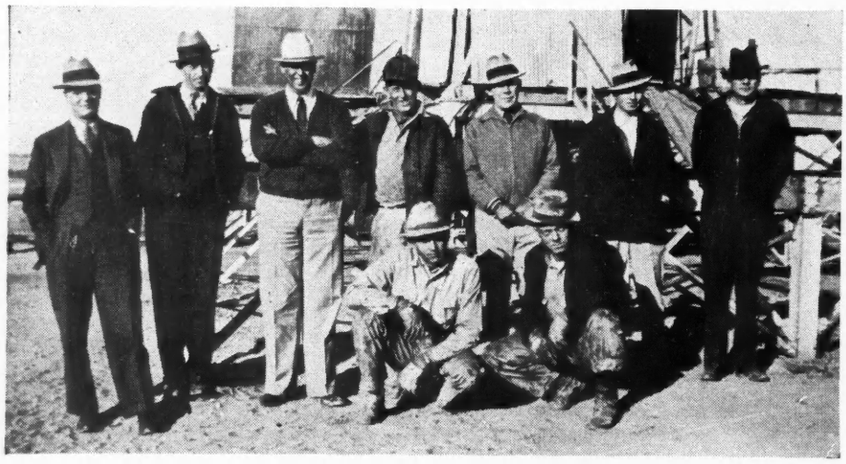
Relief From New Refinery

Some relief on the marketing problem will be provided shortly by the completion of a 5000-barrel capacity refinery at Talco by Eugene Constantin and others. This plant is due to process Talco production controlled and purchased by American Liberty Pipe Line Company, and also oil purchased on contract by the latter in the Sulphur Bluff field.

Survey of field operations at Talco reveals 22 active tests, derricks erected on 17 additional locations, and 5 wells awaiting installation of standard rigs to pump.

Six Drilling at Sulphur Bluff

Two completions in the Sulphur Bluff field, Hopkins County, the past week enabled this Paluxy sand area to finish the year with 10 flowing wells and a pumper. Operations are under way on six additional tests, offsetting production, and a steady drilling pro-



Group photo taken at Amerada Petroleum Corporation et al's Averitt 1-A, late West Texas oil strike and on the Seminole geophysical prospect, Gaines County, includes: (left to right, standing) John West, district land man, Midland; F. Wayne Covault, superintendent Texas-New Mexico operations, Fort Worth; Jack Starkey, district superintendent, Hobbs; Claude Driscoll, gang pusher, Hobbs; W. D. Anderson, district geologist, Midland; Joe Hathaway, foreman, Seminole; and unidentified workman, all with Amerada Petroleum Corporation. Front row, left to right: Roy Manning, driller for Noble Drilling Company, and K. V. Stephenson, gang pusher, Hobbs.

gram is scheduled for the current year. The first pipe line connection for this area was placed in service late last week by American Liberty Pipe Line Company, owner of a 20-mile, 6-inch line that connects to storage at Talco.

A natural flow of 60 barrels of oil per hour through open tubing was recorded by D. S. Hager, W. P. Luse and Russ Petroleum Company's J. E. Worsham 6, an inside location on the discovery lease, after logging saturated sand section at 4493-4535 feet, with an elevation of 442 feet. This independent group previously completed Jeff Worsham 1, flowing 35 barrels per hour from sand at 4498-4537 feet, with an elevation of 444 feet. Rig has been skidded one location west to drill Jeff Worsham 2. Drilling is under way on J. E. Worsham 8. Hager and Luse's J. G. Reynolds 2, west outpost, was drilling below 2000 feet. F. D. Jones Drilling Company, Dallas, et al's S. B. Pierce-Gulf 7, first test for the 200-acre lease, was preparing to complete late last week after logging oil saturation at 4474-4526 feet, with an elevation of 447 feet. Walter L. Goldston and Big State Oil Corporation's H. J. Smith 3, most northerly location, was preparing to start up after moving in their own rotary. Empire Oil & Refining Company, the only major participating in the production, was drilling below 3600 feet on J. E. Worsham 2.

3 Trinity Starts

RATED AMONG BEST 1937 WOODBINE PROSPECTS

Tyler, Texas.—Drilling operations on three previously announced Trinity sand tests for the East Texas Woodbine belt were launched the past week. These projected deep tests are supported by favorable geological and geophysical data and are rated among the best prospects slated for testing during 1937.

Tom F. Hunter, Wichita Falls, and American Liberty Oil Company's Geo. E. Gage 1, SEC 160-acre tract of C. Bird Gilbert Survey, has cemented surface pipe to explore the Trinity section underlying the Blackfoot structure, north central Anderson County. Seven majors and the Argo Royalty Company have aided in financing this proposed 8500-foot test, which will be drilled on contract by Jack W. Frazier, Houston. In southwestern Anderson County, Tide Water Associated Oil Company and Seaboard Oil Corporation's Monnig Bros. 7, first deep prospect for the Long Lake field, also began operations the past week.

Search for a third producing area from the Trinity series along the Mexia-Talco fault trend has been undertaken by Superior Oil Company of California et al's P. D. Paul 1, SEC of 160-acre lease, Mary Latham Survey, 4½ miles northeast of Quinlan, Hunt County. The above company is fulfilling an obligation to drill a free test and carry Moncrief & Showers, Inc., W. L. Pickens and Ed. Hyde for one-half interest in the drilling site as part consideration for acreage acquired from the latter group for $175,000 cash last March.

Falls County Test to Resume

Operations were scheduled to be resumed late last week on J. Edward Mills, Austin et al's Sam Grucholski 1, situated in eastern Falls County and about 5 miles southwest of Kosse, after being idle for three months in upper Glen Rose lime at 4114 feet. Owners plan to deepen the hole 1500 feet, if necessary to reach the Basal Trinity series.

Humble Oil & Refining Company's Easter 1, situated on the Emory geophysical high in eastern Rains County, topped the anhydrite section which separates the two Glen Rose lime zones at 6985 feet, or 6547 feet below sea level. Drilling was in progress at 7265 feet late last week, anhydrite and shale being logged.

In Freestone County, the Woodbine sand test of R. L. Wheelock, J. L. Collins et al on the Wm. R. (Bill) Boyd, Jr. 410-acre tract, F. P. Cabler Survey, about four miles southwest of Fairfield, encountered salt water sand after penetrating the Woodbine section to 4385 feet, with an elevation of 425 feet. This apparent failure was drilled on land owned by the executive vice-president of the American Petroleum Institute. Drilling was resumed late last week on C. A. Everts, Dallas, et al's O. W. Killam 1, J. Robbins Survey, about 6½ miles southeast of Fairfield, after halting operations above the Pecan chalk zone at 3490 feet. It has an elevation of 368 feet.

255 PERMITS GRANTED

Southwest Texas reports 3407 locations in 1936

Austin, Texas.—The Texas Railroad Commission approved last week permits for drilling 255 new wells in Texas, 71 more than were allowed the week before.

East Texas led the list with 92 locations which included 48 in Rusk County, 42 in Gregg County, and 2 in Smith County.

Southwest Texas reported 56 permits, with 25 in Nueces County and 12 in Duval. There were 17 from the Gulf Coast area.

East Central Texas listed 48 locations, with 33 in Cass County.

North Texas reported 32 permits, which included 16 from Wichita County. There was only 1 from West Central Texas, and there were 9 from the West Texas district.

These new permits, the last filed during the year, brought the 1936 total to 15,009 locations. They were distributed as follows:

Southwest Texas	3,407
East Texas	2,821
East Central Texas	1,881
Gulf Coast	1,798
North Texas	1,850
West Texas	1,749
Panhandle	680
West Central Texas	823

Permits granted during the year were concentrated in 56 counties where 13,858 were allowed. This group included those counties in which 50 or more permits were granted.

Ten counties accounted for 6,970 of the total permits allowed. These are as follows: Gregg County 1215, Duval County 1131, Rusk County 988, Nueces County 780, Titus County 585, Young County 570, Winkler County 491, Archer County 417, Ward County 397, Cass County 396,

Officials estimate that two-thirds of the permits granted result in a well and that of the wells drilled, approximately three-fourths come in as producers.

EAST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Gulf Oil Corp., Elinora Cole 5 (28.99-ac)	8200	3799
Harry Hanbury et al, Van Zandt-Ohio 2 (36.17-ac)	30	3670
Overton Ref. Co. (was P. C. H. Oil Co.) M. Green 2 (4-ac)	3000	3828
KILGORE AREA—		
J. G. Beard et al, J. S. Elder 16 (72.16-ac)	*	3571
S. J. Felsenthal et al, J. E. Choice 2	360	3743
Gulf Oil Corp., C. E. Christian 34-C (277.85-ac)	8500	3716
H. & F. Corp.-J. B. Sowell (was Kniveton), P. Crews 6 (63.83-ac)	4600	3734
C. V. Lansberry, Rec., Allison-Money 16 (320-ac)	2500	3589
Southwest Corp. (was Jarrett Pet. Co.), Paul Jones 2 (5.57-ac)	7000	3648
Sun-Seaboard Oil Corp., Ed. Smith 9 (57.31-ac)	9600	3640
United E& W Oil Co., G. Benson 1	*	3685
LONGVIEW AREA—		
J. C. Burnett et al, State 1-B (58/100-ac)	1200	3593
Humble, T. B. Harris 27 (175.18-ac)	4500	3569
W. W. Holland 30 (201.63-ac)	5500	3635
A. L. Hughes 16-A (91.8-ac)	10,000	3636
W. W. Lechner & Hubbard, F. Jones 2 (6-ac)	10,500	3604
Magnolia, H. Hampton 24 (153.33-ac)	9000	3645
Miller-Lacy Oil Co., W. R. Nicholson 4 (20-ac)	4500	3677
O. J. Perren & A. L. Fell, C. C. Landers-Shell 8 (25.93-ac)	3600	3726
Stroube & Stroube, Bumpass 6 (33.65-ac)	8500	3494
The Texas Co., T. B. Stinchcomb 7 (87.29-ac)	500	3822
HOPKINS COUNTY (Sulphur Bluff Field)—		
D. S. Hager, W. P. Luse and Russ Pet. Co., J. E. Worsham 6	1440	4535
Jeff M. Worsham 1 (39.82-ac)	750	4537
TITUS COUNTY (Talco Field)—		
K-A Oil Co., Talco Townsite Co. 1, lot 1, blk 31	672	4335
Humble, A. P. King-Hughes 22 (1053.36-ac)	168	4332
Magnolia, W. H. Crawford 6 (80-ac)	362	4320
K. Mainard 3 (130¾-ac)	360	4305
J. S. Rushing et al, C. T. Mitchener 1 (37.2-ac)	1440	4295
ROBERTSON COUNTY—		
J. Edward Mills et al, Tony Congelosi 1	†	2250

*Failures; †Junked; ¶Million cu. ft. gas.

Off to Good Start

LOWER COAST AREA HAS IMPORTANT TESTS PENDING

WEEKLY STAFF REPORT

Corpus Christi—The new year starts off with a barrage of discoveries in the South Texas Gulf Coast. Areas uncovered the last few days of 1936, and those being established during the first several days of 1937 place this district in brighter light than ever before.

Nueces County had one discovery well completed and two potential discovery wells in process of completion during the week, while Jim Wells County added one discovery and San Patricio and Victoria Counties each had a new area in prospect.

New Saxet Deep Sand

Hiawatha Oil Company's N. J. Griffith 6 established a new deep sand for the Saxet field, 400 feet deeper than the former deepest level when it was completed through perforations at 6750-58 feet. The well, located in the Frank survey 416, is near the heart of the present development and is offset by producers in various shallower sands. It drilled to 6802 feet, logging sand at 6725-59 feet, showing both oil and gas. Casing was landed at 6770 feet where it swabbed salt water and is plugging back to perforate and test at 5564-70 feet.

Probably of more general importance to the district is La Jita Corporation's Frame and Bowers 2 in the Bentonville-King sector of Jim Wells County. A sand was logged at 5681-85 feet, total depth, to open a new horizon 300 feet deeper than the former deepest producing level. Completed from this sand, it was flowing more than 5 barrels of 42 gravity oil per hour through ⅛-inch shoke and showing pressures of 715 pounds on tubing and 950 pounds on casing. The gas/oil ratio was 700/1.

Two Wildcats Completing

Wellington Oil Company has two wildcats in process of completion in Nueces County, one of which may open a new field, while the other is attempting to establish deeper production in an already proven area.

Myrtle Stockton 1, SW NE Section 25, 12 miles southwest of Corpus Christi, drilled to 7005 feet, set 5-inch casing at 6227 feet and perforated at 6150-56 feet with 12 shots. This sand was indicated on an electric formation tester and likely is in the Frio. The well originally was started by Cosner & Cosner and drilled under contract by Rowan & Hope. It was taken over at 4729 feet following an oil show at that level, the Wellington organization carrying it to the present depth.

On the southeast flank of the Clara Driscoll field, Wellington Oil Company, jointly with Pan American Production Corporation, is attempting to open a new deep sand with Sevier 1-A. The well was drilled to 6075 feet and landed 4¾-inch casing on bottom. It was gun perforated at 5750-55 feet with 12 shots.

Plymouth Oil Company is testing a series of sands below the regular producing levels in the Plymouth field, San Patricio County. E. H. Welder 65-C, Section 50, of the Welder Ranch Subdivision, had progressed to 6194 feet and ran a drill-stem test at 6189-94 feet, showing salt water and white distillate and has been plugged back to test through perforations to be made at 5425-30 feet.

Magnolia Petroleum Company continued its efforts to cut off salt water intrusion in Willie Beck 1, potential field opener 4½ miles northwest of Telferner in Calhoun County. The well plugged back from 4812 feet to 4112 feet, where it was flowing a large volume of gas when the salt water broke in. The last efforts to cut off the water have been through the squeezing of 30 sacks of cement into the bottom of the hole. This company plans further development of this block and plans to use the gas from this well for fuel.

Wildcatting generally remains steady through the Trans-Salt Dome Region. A number of new deals have been completed which will bring further work immediately after the first of the year.

SECOND WELL BETTER

Alta Mesa producer gets 129 barrels in 19 hours

Mission.—The California Company has completed the second producer on its Alta Mesa block in Brooks County, the new well far surpassing the first in initial output. It is B. Garcia 3-2, south offset to the discovery well of the 2400-foot horizon. On a 19-hour gauge, it flowed 128.9 barrels of pipe line oil through ¾-inch choke with no pressure on tubing and 420 pounds on casing. The sand was logged from 2451 to 2468 feet, the bottom of the hole.

Other than several shallow pumpers in the Alta Verde area, this district is the only one to provide commercial oil production in Brooks County. A number of major companies have holdings in the county in large blocks and on commercial basis, thus retarding the development of its potentialities. The county, however, is looked upon as an important reserve.

Pantano Oil Company has set 7⅝-inch casing at 6805 feet in J. C. Engelman 1-B, 1½ miles southeast of the wild gasser which opened La Blanca deep field in Hidalgo County. It will drill to sands around 7500-8000 feet. One mile south of the same well, this company is coring near 7750 feet in James McDougal 1, which already has encountered a number of distillate sands.

About 17½ miles northeast of Rio Grande City in Starr County, F. Davenport and Transwestern Oil Corporation's T. B. Slick Estate 1, deep wildcat, is shut down for repairs at 5607 feet. It has cored a solid sand section in the upper Jackson from 5570 feet. The sand carried considerable gas and some distillate.

NEW CHALK FIELD

Austin yields oil in Caldwell County well

San Antonio.—Brown Drilling Company was completing G. M. Blackwell 1, Caldwell County wildcat, late in the week to open a new Austin Chalk field for the Balcones Fault zone. The well was swabbed down 1700 feet through tubing and after standing 12 hours the fluid level rose 550 feet. Tubing was pulled and the hole bailed, showing considerable mud near the bottom. It is to be washed again before being placed on pump. It later will be acidized to increase output.

The test, 7 miles southwest of Lockhart, has an elevation of 486 feet, derrick floor. It topped the chalk at 1918 feet, going out of that formation at 2154 feet. It topped the Buda at 2171 feet, stopping in that formation at 2191 feet.

It is 800 feet from the north line and 225 feet from the west line of a 409-acre tract in the John Roe survey and is 1500 feet west of Grayburg Oil Company's Blackwell 1, drilled some time ago. It logged considerably higher than the old well and may be sufficiently high to indicate Edwards lime production.

Austin chalk play through this sector of the Balcones Fault zone is increasing in importance with additional oil fields being opened. Guadalupe, Caldwell and Bastrop counties are being well leased, and a number of new tests are being commenced in an effort to find production at these levels.

Wildcat to Plug Back

Burleson County's hot wildcat, 7 miles west of Chreisman failed to develop oil production in the Edwards lime at 6226-41 feet and probably will be plugged back to test a 15-foot sand section indicated around 4000 feet in the Navarro when an electric device was run. Further testing will be done in the lime after plugging back several feet. It then will test the upper level. The test is Red Bank Oil Company's Nellie Gramm 1, second operation by this company on the prospect. One bit of encouragement on the test was the fact that it showed a small amount of free oil on top of the salt and sulphur

water column. There also was a slight gas blow.

Amerada Petroleum Corporation is rigging up standard tools after drilling to 6200 feet with rotary in Halff & Oppenheimer 8, deep Pearsall field, Frio County, test. It will drill the Edwards lime section, expected within the next few feet, with cable tools. Whether or not the project will drill the remainder of the lime section with cable tools or rotary is not known. The well is reported to be running higher than other tests drilled in the field and may be the key to further deep production for this field.

Helvetia Oil Company continues its tests in Susie Pratt 2, on the Anchorage prospect in Atascosa County. After plugging back to 3250 feet and making a shot in the serpentine, the well again is being cleaned out preparatory to shooting again.

Joe Mills is testing a showing in Charles Eskew 1, near the Hilbig field in Bastrop County. It was drilled to 2904 feet in the Austin chalk, but plugged back and set casing at 2458 feet.

DUVAL COUNTY

Production search to be continued

Laredo.—Although the main Seven Sisters field, Duval County, is nearing the end of its development campaign, considerable work may be expected in the general area in an effort to open new sand lenses on the flanks of the structure.

Magnolia Petroleum Company recently completed Labbe 1, central portion of Section 221, more than a mile east of the field and just northwest of the Labbe field gas production, as a 15,000,000 cubic foot gasser in the Loma Novia sand at 2850 feet, the sand being topped at 2843 feet. It showed pressures of 550 pounds on casing and 850 pounds on tubing. Since that completion, the company moved more than a mile to the northeast for A. L. Labbe 3, which will attempt to establish oil production in the same horizon.

This particular portion of Duval County has proved unusually prolific, the Seven Sisters field having four main producing horizons ranging from 2000 to 2750 feet.

Similar work is under way along the flanks of most of the fields of this territory, although no recent discoveries have been reported. The trend, however, is to study sand conditions and develop sand trends along these flanks with an idea of exploring these features.

PLAY IN PROSPECT

Beeville.—A new wildcatting play on trend with the Oakville field and other comparatively shallow Pettus sand areas through this district is in prospect after the first of the year. The discovery of oil production in the Oakville and Plummer fields and excellent showing of gas on the Live Oak-McMullen County line in the Government Wells sand revive this heretofore dormant district.

New locations have been staked in both the Plummer and Oakville fields and acreage is sufficiently well broken up that considerable additional work as a result of offsets may be expected.

Just across the Live Oak County line in McMullen County, Edwin M. Jones' Ezzell 1 has been shut down after completing a 10-day job of killing a wild gas flow from the Government Wells sand at 1181-1203 feet. The well was bottomed at 1280 feet when the blowout occurred. A new location in Section 13, two miles south of the wild test, is active for Ezzell 2.

Ohio Fuel Supply Company has gauged H. J. Rosebrock 1, first Pettus sand oil well in the Oakville field. It flowed 36 barrels per day through ¼-inch choke with 500 pounds working pressure and 720 pounds casing pressure. It is showing a large volume of gas. The well is in sand at 2797-2808 feet.

Two outpost wells to Bee County fields were abandoned in the Pettus sand. Blanco Oil Company and Al Buchanan's M. Dugat 1, in the Dirks area, stopped at 3940 feet, while Luling Oil & Gas Company's J. T. Borroum 2, on the southwest side of the Caesar field, was a failure at 3078 feet.

SOUTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BEE COUNTY—		
Blanco Oil Co. and Al Buchanan, Dugat 1, 700 ft sel, 150 ft nel James Gray sur (Dirks)	*	3940
Luling O&G Co., Borroum Est. 2, Baker sur (Caesar)	*	3078
BROOKS COUNTY—		
The California Co., B. Garcia 3-2, 1395 ft nl, 330 ft wl of B. Garcia tr No. 3, La Mestina de Gonzalina gr, (Alta Mesa)	350	2468
CALDWELL COUNTY—		
Taylor Refg. Co., Caldwell County 1, Dillard Cooper sur (Braynon)	25	2165
Whisenant & Trenchard, Hal Browne 4, J. R. Miller sur (Branyon)	75	2209
DE WITT COUNTY—		
D. G. Glaspie et al, Olson 5, A. Dillard sur (W) 550 ft nl, 150 ft el of 50-ac tr	*	651
DUVAL COUNTY—		
W. W. Blocker, Coopwood-State 2, sur 382 (Seven Sisters)	1200	2451
Cox & Hamon, Peters 12, Mary Chatham sur (Lopez)	500	2134
Peters 29, Mary Chatham sur (Lopez)	400	2149
Diamond Half Oil Co., Serna Jr, 5, sur 384 (Seven Sisters)	196	2210
N. V. Duncan, Worden & Drought 2, 700' n, 45 deg w of No. 1, sur 151. 2425' el 334' nl of sur Charamousca	*	1700
Humble, DCRC 1-C, sur 901 (Lopez)	¶20	2099
Hubberd 24-B, sur 83 (Loma Novia)	900	2760
Hubberd 63-B, sur 72. (Loma Novia)	350	2780
Smith, 37, sur 382. (Seven Sisters)	450	2449
Smith 38, sur 382, (Seven Sisters)	500	2439
Welder 20-C, sur 554. (Loma Novia)	250	2724
Magnolia, Labbe 1, 2330 ft wl, 2586 ft nl sec 221, 2/3 mi nw field (Labbe)	¶15	2850
Ralph Ogden, Ruiz Est. 1-B, sur 41, (Loma Novia)	125	2582
L. H. Sexton, Benavides 1, Sec. 22 (Cole subd.)	*	3050
Standard of Kansas, Hoffman 8-A, sur 118 (Hoffman)	¶10	2753
Elmer Thomas et al, Peal 1, sur 794, 330 ft s & e Lines of sur 794 1 mi e of Lopez field	*	2550
Wellington Oil Co., Welder heirs 22, sur 383 (Seven Sisters)	750	2480
HIDALGO COUNTY—		
Harrison-Danvers, Guerra 2-A, Porc. 38 & 39 (Samfordyce)	275	3002
Henshaw Bros., F. de Chapa 2, porc 39 (Samfordyce)	500	2956
JIM WELLS COUNTY—		
La Jita Corp., Frame & Bowers 2, King Ranch sub (Bentonville)	850	5685
LIVE OAK COUNTY—		
Ohio Fuel, Rosebrock 1, Louis Romero sur, (Oakville) 330 ft sel & swl of lease, northeast side of shallow gas field	¶5 & 50	2808
McMULLEN COUNTY—		
Conservative Oil, Stitz 15, J. Garner sur (Calliham)	10	711
Joe B. Coursey, Lark 3, (Calliham) B. Scrugham sur	18	1048
W. P. Howard, Claunch 6, M. Hely sur (Calliham)	*	450
Loma Oil Co., Jacob Corp. 107-A, Leonard Jacob sur, (Jacob)	*	905
National Pet. Co., Lark, Michael O'Boyle sur (Jacob)	35	974
MEDINA COUNTY—		
Joise Oil Co., Medina Irrigated Farms 1-A, 300 ft sl, 206 ft wl, lot 1, blk 32, sec 7, Medina Irrigated Farms sub	*	1852
NUECES COUNTY—		
W. C. Brady, Perkins 1, County Club Place. (Saxet Heights)	350	4083
R. B. Bryant, Scoggins 6, sur 315 (Saxet)	320	4576
Conroe Dr. Co. & H. M. Reed, Meyers 1, sur 107 (Clara Driscoll)	*	4503
Hiawatha Oil Co., Hutchins-Stillwell 7, 330 ft nl & el lot 34, Sheppard farm lots (Saxet)	450	6363
Humble, Reed Estate 1, Flour Bluff Encinal Garden Tracts (Flour Bluff)	500	6662
Phillips 2, Flour Bluff & Encinal Garden tr, (Flour Bluff)	500	6656
G. M. Richardson et al, Carter 1, Center of nw¼ of sec 8, Laurless Farm Tract (abt 8 mi s CC & 2 mi se London)	*	6557
Richard Pet. Co., Quiros 6, Sheppard Farm lots (Saxet)	650	5836
Texon Drilling Co., Scoggin 3, sur 316 & 315 (Saxet)	650	4442
Sam Wilson Jr., Uehlinger 1, oak park (Saxet Heights)	300	4089
REFUGIO COUNTY—		
Hewitt & Dougherty, Lambert 36, sur 6, (Tomoconnor)	750	5914
Quintana Pet. Co., O'Connor 42-A, sur 4, (Tomoconnor)	2500	5925
O'Connor 9, G. W. Mair (Tomoconnor)	2500	5925
SAN PATRICIO COUNTY—		
Hooper & Rutherford, Inc., Willis 1, T. T. Williamson sur (Gregory)	*	7213
Humble, Flynn 1, Taft farm land sub (Taft)	750	3985
Texon Roy Co., Harvey 1, 330 ft n & wl's of blk 13, Rincor sub, George Sargent sur, ab 231, 4 mi Gregory & 5 mi n & slightly w of Eleanor 1 Kline	*	6517
STARR COUNTY—		
Fech Oil Co., Doyno 12, por 81, (Rio Grande City)	30	1432½
WEBB COUNTY—		
French Oil Corp., Garcia 1, 330 ft sl, 330 ft wl e 80-ac of n 330-ac, sur 1121	*	2234
Frank J. Gravis, Yeager-Strohman 12, Las Animas Gr, (Albercas)	*	3629
Rowan & Hope, Bruni 1, sur 857, 330 ft nl 330 ft el blk 2, 5 mi se Mirando City	*	3405
Sierra Oil & Royalty, Billings 2-B, sur 113 (Lopez)	600	2225
Smith & Hammill, Benavides 39, Mariano Arispe Gr	750	2934
Superior, Masterson 1, 330 ft sl, 330 ft wl sur 35	*	2035
ZAPATA COUNTY—		
Magnolia, Haynes 3, sur 7 (Comitas)	35	1085
Haynes 4, sur 7 (Comitas)	60	1100
Haynes 7, sur 7 (Comitas)	85	1071
J. P. Nash, Trustee 26, A. D. Haynes sub (Comitas)	32	1053
Upchurch & McKay, Haynes 15, (Comitas) Haynes sub	35	1044
United, Haynes 13, Haynes sub, (Comitas)	35	1021
United, Haynes 14, Haynes sub, (Comitas)	35	999
A. D. Haynes 15, Haynes sub, (Comitas)	40	1039
Valley Osage Oil Co., Haynes 3, Haynes sub (Comitas)	40	1089
The Zapata Corp., Garza Estate 8, A. Douglas sub (Escobas)	90	1162

*Failures; †Junked; ¶Million cu. ft. gas.

Segno Looks Better

DISCOVERY FLOW INCREASES; SECOND LOCATION IS MADE

GULF COAST WEEKLY STAFF REPORT

Houston.—J. K. Dorrance et al's S. Wings 1, Segno prospect, I. & G. N. Survey, Polk County, which opened a new oil field last week, was making 520 barrels daily through a quarter-inch choke with a tubing pressure of 950 pounds and a casing pressure of 1100 pounds. On a four-hour test the wildcat made 48 barrels per hour through a quarter-inch choke with a tubing pressure of 1150 pounds and a casing pressure of 1400 pounds. The well was completed in Cockfield sands at 5194 feet.

A new location was made at Segno by Steve Ryan. He will drill Wings 1, 220 feet each way out of the northeast corner of a 10-acre tract, or approximately 660 feet southwest of the discovery well and 660 feet from the north line of the H. & T. B. Survey, No. 10.

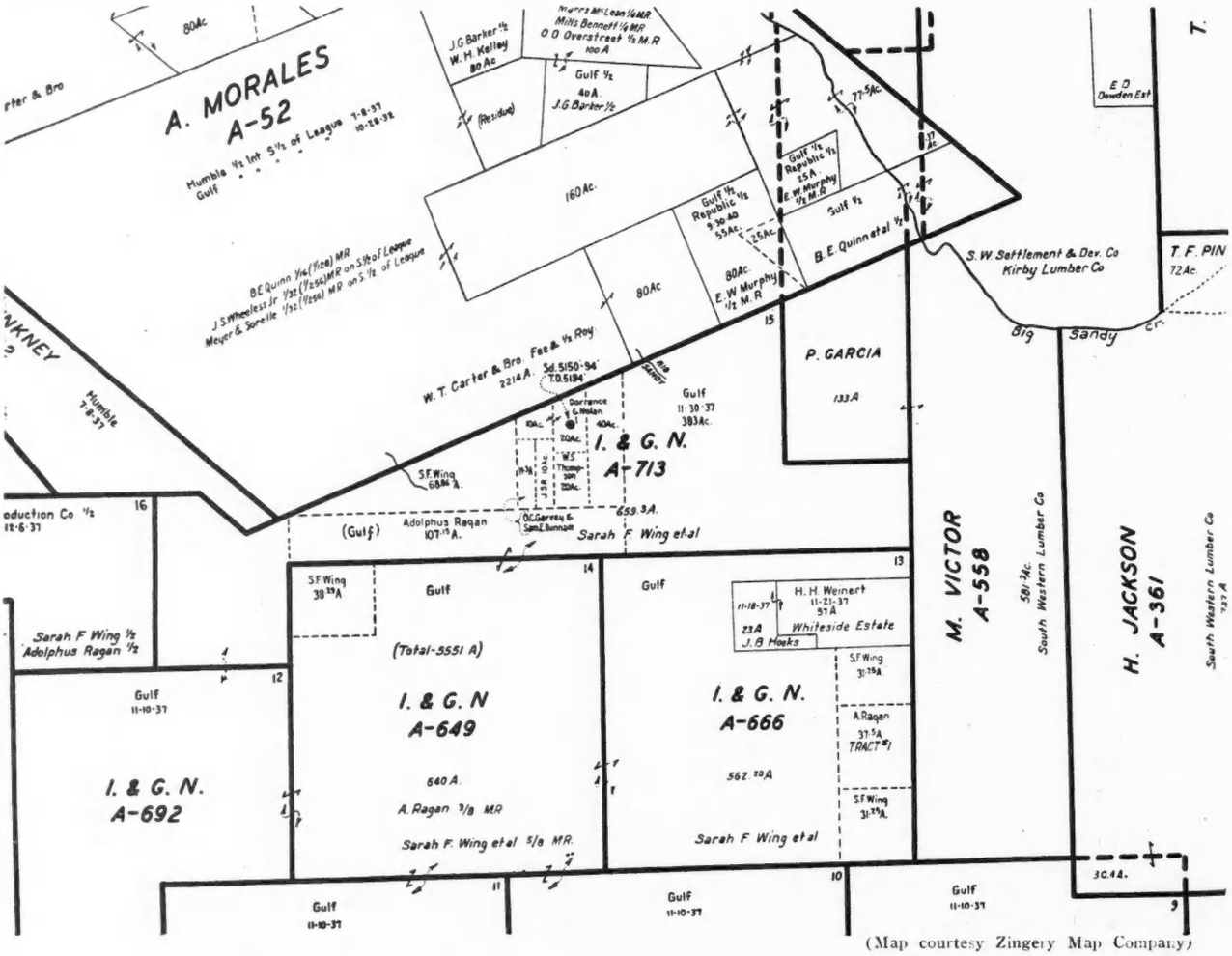
At Cotton Lake in Chambers County, Salt Dome Oil Corporation's A. Lawrence 1-A, S. Barrow Survey, was killed and seven-inch casing will be perforated again. The well was making 16 percent oil and the balance salt water from sands at 6538 feet. Salt Dome Oil Corporation made location Lawrence 1-B, 740 feet south of Lawrence 1-A and in the center of a 50-acre tract in the S. Barrow Survey.

On the Seabreeze prospect, Chambers County, Sun Oil Company was preparing to test White Estate 2, T. & N. O. Survey, Section 128. Casing has been cemented at 8715 feet and the leak in the casing repaired. Tubing, screen and liner will be set and a production test made the coming week.

New Amelia Sand Found

A new producing sand was discovered on the north side of Amelia field, Jefferson County, when Glenn H. McCarthy completed two wells in Marginulina formation. Both were completed at the same depth. Longe B-1 made 225 barrels through a quarter-inch choke with a tubing pressure of 1700 pounds and a casing pressure of 1900 pounds. Longe B-2 made six barrels per hour through a quarter-inch choke with a tubing pressure of 1900 pounds and a casing pressure of 2050 pounds. Both were perforated with 12 shots from 5858 to 5868 feet and with 12 shots from 5874 to 5894 feet.

On the southwest side of Amelia, Humble Oil & Refining Company was waiting on cement to set in Phelan 2,



(Map courtesy Zingery Map Company)

The new Segno field in Polk County, which was opened December 24 by J. K. Dorrance et al's Wing 1 that flowed 48 barrels per hour.

C. Williams Survey, at 6781 feet. The casing will be perforated next week.

In the Cheek area of Jefferson County, Humble Oil & Refining Company made location for Jefferson Land Company 1, 1450 feet south and 466 feet east of the southeast corner of the S. Corzine Survey in the C. Hillibrand Survey.

In the Gilbert Ranch area of Jefferson County, David B. MacDaniels J. N. Gilbert 1, J. Ricord Survey, was abandoned at 7305 feet and it was reported to be in the Marginulina formation.

Kenco Oil Corporation is reported moving in material to drill E. B. Pickilt 1, 660 feet from the south line and 660 feet from the southwest line of a 72-

Christmas trees like this are scattered over about 3000 acres at Anahuac. After completion of oil producers the rigs are moved and a nice fenced in tree is installed.

TEXAS GULF COAST

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
AMELIA—		
Glenn H. McCarthy, Longe B-2.....	225	5894
Longe B-1	144	5894
ANAHUAC—		
Humble, Marshall 4	600	7111
ARIOLA—		
Republic Prod. Co., Ariola 6 (wo)..	68	2986
BIG CREEK—		
San Jacinto Oil Co., Bassett Blakley 1	*	2980
Thompson Dr. Co., Moore 1	*	3690
COTTON LAKE—		
Humble, Nancy F. Howard 2.....	*	lcn.
Nancy F. Howard 3	*	lcn.
DICKINSON—		
Smith & McDaniels, Shelor 1	11	7990
HASTINGS—		
Humble, Berkhemer 1	624	6080
Stanolind, Blount 1	720	6080
Ford 8	264	6080
Lang 1	624	6080
Scott 2	624	6080
HULL—		
Gulf, Phoenix 71 (wo)	64	3588
LOUISE—		
Pure, Weaver 4	60	5145
MANVEL—		
Texas Co., Way B-3	152	4105
MARKHAM—		
Texas Gulf Prod. Co., Hudson 1..	*	4234
NOME—		
Shell, Paggi 2	240	6055
PIERCE JUNCTION—		
Rio Bravo Oil Co., Settegast 10...	290	3438
PICKETT RIDGE—		
Texas Co., Nilson 3	240	4713
SILSBEE—		
Republic Prod. Co., Brooks Fee 2..	420	6910
SOUTH HOUSTON—		
Stanolind, Milkovits & Butz 2....	255	4088
TOMBALL—		
Humble, Albert 1	386	5582
Black 1	230	5511
WITHERS—		
Texas Co., Pierce Estate C-18.....	144	5556
FT. BEND COUNTY—		
Sam Harrison, V. Horak 1, Needville prospect, H&TC sur, sec 36	*	7025
GRIMES COUNTY—		
Fred Harris, Chaney 1, w of Mesa, M. Donohue sur	*	3018
JEFFERSON COUNTY—		
David B. McDaniels, Gilbert Ranch 1, Gilbert Ranch prospect, J. Ricord sur	*	7305
MATAGORDA COUNTY—		
Continental Oil Co., Hawkins 1 ..	*	5140
Tietts & Harris, Pierce Estate 1, Blessing prospect, J. W. E. Wallace sur	*	7723
POLK COUNTY—		
J. K. Dorrance et al, S. Wings 1, Segno prospect, I&GN sur, abstract 713	520	5194
WALKER COUNTY—		
A. U. Morrison, Nolte 1, w of Huntsville, Wm. Hodge sur.....	*	3025
WASHINGTON COUNTY—		
Stapper Pet. Corp., Hoxie 1, S. Sample sur	*	3142

*Failures; †Junked; ¶Million cu. ft. gas.

acre tract in the H. & T. B. Survey, No. 10, Devers area, Liberty County.

New Silsbee Sand

Republic Production Company's Brooks 2, northwest of the cratered well, Silsbee area, J. W. Brooks Survey, Hardin County, was flowing 420 barrels of pipe line oil per hour through a quarter-inch choke from 6910 feet, a new producing horizon for Silsbee. Tubing pressure was 550 pounds and casing pressure was 1000 pounds.

Republic Production Company made location for Brooks 5, 983 feet east of Brooks 4 and 1156 feet north of the south line of the J. W. Brooks Survey.

In Tyler County, Republic Production Company plugged back Hurd Fee 1, N. Hurd Survey, to 7670 feet where it was waiting on cement to set preparatory to testing sands showing oil from 7697 to 7707 feet. The previous week a drill stem test from 7706 to 7714 feet showed salt water.

Sumas Production Company made a location for a wildcat in Waller County last week. Menke 1 is 600 feet east of the west line and 750 feet south of the north line of a 435-acre tract in the C. Donohue Survey.

Approximately 1700 feet east of production in Hastings field, Humble Oil & Refining Company's Berhemer 1, B. B. B. & C. Survey, Brazoria County, was completed making 624 barrels daily through a quarter-inch choke with a tubing pressure of 1525 pounds and a casing pressure of 2350 pounds. Sand showing oil was logged from 5991 to 6061 feet.

On the Needville Prospect in Ft. Bend County, Sam Hendrick's Horak 1, H. & T. C. Survey, Section 36, was abandoned at 7025 feet after coring salt water sands from 4769 feet down to the bottom of the hole. Several shale breaks were encountered.

South Bay City Well Testing

Hammond Exploration Company's Croker 1, 2400 feet north of the discovery well at South Bay City field, E. Hall Survey, Matagorda County, perforated casing last week from broken sands and shales showing oil from 9505 to 9550 feet and at the close of the week was making a production test. It was rumored that the well was showing salt water but this could not be confirmed. Seven-inch casing was set at 9575 feet.

Another failure was reported during the week for Sheppards Mott area, Matagorda County, when Continental Oil Company completed Hawkins 1 as a dry hole at 5140 feet. A stuck drill stem was the cause of abandonment. This prospect is one of the worst heaving shale districts in the Gulf Coast.

Gulf Oil Corporation's Reiss 1, 7800 feet north of the discovery well at Lochridge field, J. W. Hall Survey, Brazoria County, has missed the regular producing sand which was found in the discovery well. At the end of the week the well was drilling in shale at 6560 feet and is about 200 feet lower than the discovery well. The same operator's Gibson 1, southeast of the discovery well, J. W. Hall Survey, was drilling in shale at 6090 feet and should be down to the producing sand next week.

OPENS TEXAS OFFICE

San Antonio.—Fullerton Oil Company, with headquarters in Los Angeles, California, has recently entered Texas as an active concern. Principal offices in Texas have been established in San Antonio. E. L. Porch is resident geologist, and Claude V. Birkhead Texas agent.

Fullerton Oil Company was incorporated in 1900, and has engaged in the oil production business since that time. It has extensive production in California, and enters Texas with a capitalization of $2,000,000.

Oil At Valentine

HARANGE 1 FLOWS 20 BBLS. HOURLY FROM SHOAL RIVER

Lake Charles.—Pan-American Production Company and Barnsdall Oil Company discovered a new field in the Louisiana Gulf Coast December 30 when Harange 1, Valentine Prospect, Section 7-17s-20e, La Fourche Parish, came in flowing 20 barrels of 33 gravity oil per hour from Miocene sands at 6930 to 6950 feet. The flow was through ¼-inch choke. Tubing pressure was 500 pounds; casing pressure 450 pounds.

Seven-inch casing was cemented at 6974 feet after a drill stem test from 6957 to 6974 feet showed 120 feet of pipe line oil, 90 feet of sand and 180 feet of drilling mud in 2 minutes. After cement had hardened, the crew perforated the casing with 20 shots from 6930 to 6950 feet. The sand has been described as the Shoal River sand of Miocene.

On the Abbeville prospect, Vermilion Parish, Continental Oil Company was preparing to rotate a special string of 2½-inch tubing down to 11,795 feet to make a production test. Five-inch casing was cemented at 11,795 feet after failing to go to 12,216 feet. The crew encountered considerable trouble with the hole while running the long string, and the 5-inch was cemented onto the 9⅝-inch casing with 150 sacks. A test will probably be made of the 11,732-foot sand, which showed gas and oil some time ago.

South of Abbeville, Stanolind Oil & Gas Company was drilling ahead below 10,619 feet December 31 on Fred Stoval 1, Section 89-14s-3e, Vermilion Parish. The wildcat is being drilled down to an undetermined depth.

Two Extensions at Lafitte

Two extension wells at Lafitte, Jefferson Parish, were holding attention of operators in this area during the past week. The Texas Company's R. C. Milling 1, northeast of production, Section 20-17s-24e, was setting a string of 7⅝-inch casing to make a production test. The hole is bottomed in sand showing oil. Top of the clean oil sand was found at 9941 feet. Above this depth and around 9884 feet a broken sand showing oil was logged.

The Texas Company's Rigolets 5, Section 29-17s-24e, south flank test, was also running a string of 7⅝-inch casing to 10,244 feet. This is one of the longest strings of this size casing ever set in a Louisiana Gulf Coast well. The casing was cemented with 2000 sacks.

It is believed that the two Texas Company wells at Lafitte field will be the first wells in the world to produce commercial oil by natural flow below 10,000 feet. If they do, they will not only extend the field, but will be the deepest producers in the world and will open a new producing horizon for the field. The deepest natural flowing oil well in the world is at Old Ocean in Brazoria County. It was completed at 9963 feet.

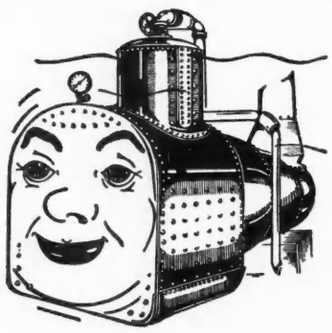
A new wildcat location was announced by Stanolind Oil & Gas Company on the Hayes prospect in Jefferson Davis Parish. United Life Insurance Company 1 is 330 feet west and 330 feet north of the SEc NE¼ of Section 16-11s-5w. The company is moving in lumber and will construct a derrick over the week-end. The wildcat is to be drilled east of Shell Petroleum Corporation's Lacassine 1, which was abandoned at 9844 feet some time ago. Lacassine 1 encountered several sands showing oil, but the sands also carried salt water. The wildcat attempted to blow out a number of times when the crew was drilling. Special drilling mud had to be pumped into the hole, and at one time it was out of control and making an estimated 50,000 barrels of salt water per day along with some gas.

Stanolind Oil & Gas Company's block is east of Shell Petroleum Corporation's block, and it was worked with reflection seismograph and torsion balance in 1935. After working the area with geophysical instruments, the company leased around 8000 acres and purchased considerable royalty in the district.

Another South Jennings Wildcat

The second wildcat location for South Jennings, gas and distillate producing area, Jefferson Davis Parish, was announced last week by H. M. Naylor, who has been successful in extending Thompson field, Fort Bend County, Texas Gulf Coast. He has made a contract with Loffland Brothers of Tulsa, Oklahoma, to drill the well to 9000 feet or deeper. It is due east of Stanolind Oil & Gas Company's Calcasieu National Bank 1, which discovered the field some time ago. Loffland Brothers are now laying a gas line from the discovery well to the new wildcat and moving in derrick materials. The well will be known as H. M. Naylor's Johnson-Bourdreaux 1, 830 feet south and 150 feet east of the south corner of Section 13, being in Section 39-10s-3w, Jefferson Davis Parish, on a 1145-acre lease. H. M. Naylor also has an additional 1500-acre tract

"DID I TELL YOU ABOUT MY OPERATION?"



"My boss kept complaining about the poor work I was doing, and how much it was costing to operate me. So finally they shut me down, ripped me open; and for hours they drilled out my tubes and made repairs!

"Well, I was all right for a short time. Then scale and corrosion started forming again — even though they did give me complicated chemical treatments—and it wasn't long before the same old trouble and expense came back. But all this was before by boss put me on the natural diet of . . .

"That was before we both knew what real protection and efficiency Sand-Banum — 'The Entirely Different Boiler and Engine Treatment' — could bring us.

"Now those pure colloids just keep me as healthy as a new born babe — no more trouble and no more costly operations. My boss says, 'Sand-Banum is SURE, SAFE and SIMPLE to use' — and I KNOW it is SWELL, look at my performance record now!"

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and at other convenient points including leading supply houses.

SOUTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CAMERON MEADOWS—		
Burton Sutton Oil Co., School Land 17	428	3663
HACKBERRY—		
Stanolind, Duhon 3	550	4775
NEW IBERIA—		
Wm. Helis, Sabatier 3	*	3180
TEPETATE—		
Continental, Homeseekers G-1	216	8318
EAST BATON ROUGE PARISH—		
Cavalier Oil Co., A. Young 1, near Zachary, 62-4s-2w	*	lcn.

*Failures; †Junked; ¶Million cu. ft. gas.

adjoining the Johnson-Boudreaux lease on the north. He has full control of the well and 2645 acres surrounding it.

Johnson-Bourdreaux 1 is located in an interesting area and is approximately 5 miles west of Shell Petroleum Corporation's Sturdevant 1, South Roanoke prospect, Jefferson Parish, and between the discovery well at South Jennings. Both the Shell Petroleum Corporation's wildcat and Stanolind Oil & Gas Company's discovery well had showings of oil and gas about the same levels. There is supposed to be a closure between the two wells. Johnson-Bourdreaux 1 is in the big bend of the Mermentau River.

Humble Oil & Refining Company was waiting on cement to set in Thomas 3, Section 12-9s-3w, Roanoke field, Jefferson Davis Parish. Seven-inch casing was cemented at 8692 feet, and sands showing oil were logged from 8657 to 8692 feet. In the same field, Shell Petroleum Corporation was coring ahead in shale below 8898 feet after making a drill stem test which showed salt water. The test from 8850 to 8857 feet showed 18 stands of oil, 5 stands of salt water, and a large amount of gas through ¼-inch choke in 8 minutes.

Jennings Flank Test Shows

On the southwest flank of Jennings field, Acadia Parish, Superior Oil Producing Company was preparing to complete Jennings Heywood 1, Section 41-9s-2w, in a new sand. The hole is bottomed in sand showing oil at 6759 feet, and 5-inch casing was cemented at 6745 feet. A production test will be made over the week-end.

Superior Oil Producing Company's other important well in the Louisiana Gulf Coast, A. Savoie 1, which discovered a new field at Cankton, St. Landry Parish, was worked over the past week and was reperforated from 5320 to 5323 feet. The test will be given a production test over the week-end. It was first perforated from 5316 to 5319½ feet and made 41 barrels in 15 hours through 11/64-inch choke.

Superior Oil Producing Company made location for A. Savoie 2 at Cankton, 425 feet south and 1207 feet west of the northeast corner of Section 26-8s-3e, St. Landry Parish. In an effort to find a new producing sand or extend Hackberry field, Cameron Parish, the company made location for Hebert 1 on the south flank.

J. R. Turnbull is seeking deeper production at Starks field, Calcasieu Parish. At the close of the week, Industrial Lumber Company 1, Section 20-9s-12w, was drilling in shale at 6235 feet, below the regular producing horizon. The deepest hole drilled at Starks was a Gulf Refining Company well which went to 7207 feet.

Probably the next 10,000-foot well for the Louisiana Gulf Coast is The Texas Company's State Vermilion Bay 1, in Vermilion Bay, 16s-5e, Iberia Parish. An electrical logging device is being run to 9946 feet before drilling ahead.

Pan-American Production Company has made location for a well at Charenton field, St. Mary Parish. South Coast Corporation 1 is 467 feet east of the west line and 467 feet south of Bayou Crue and in the SWc SE Section 30-13s-9e.

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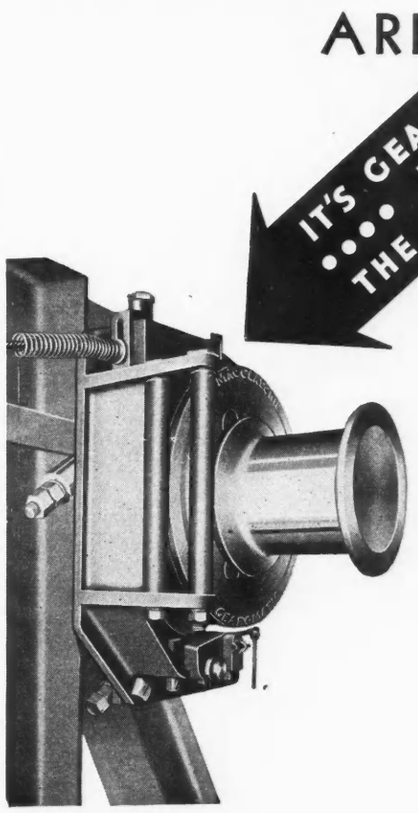

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WELL SOUTHWEST OF RODESSA TESTS BIG DISTILLATE FLOW

NORTH LOUISIANA

WEEKLY STAFF REPORT

Shreveport.—What may prove a 14-mile southwest extension of the Rodessa field production was indicated likely last week with the testing of estimated 25 to 50 million cubic feet of distillate saturated gas, open flow, in Holcomb & Thomason and Flesh & Hootkins et al's Henderson No. 1, R. Bennington survey of Marion County (Texas) on a drill stem test from 5958-90 feet in the Glen Rose lime section believed to correspond to the Hill and Gloyd zones in the Rodessa field.

Immediately after the test Wednesday, the well, located about three miles north of Jefferson, along the fault which has been mapped from Rodessa to Jefferson, prepared to core ahead to test the Dees and Young zones in the lower part of the Glen Rose which pays off in oil at Rodessa.

With one half-inch chokes on top and bottom, the testing tool was left open 17 minutes, with flow estimated at from 3 to 4 million feet of wet gas. Casing and tubing pressure was 585 pounds. The well had been reported checking low as compared to Rodessa wells and for this reason some operators think it might possibly prove a separate structure from Rodessa along the fault.

One mile west of production on the Cass side of the field, W. F. Lacy prepared to run casing in Lewis 1, H. Holbert survey, which is at 6058 feet in the Young zone. This zone, with the Dees, is reported to have carried some saturation.

In this same area, half mile outside of production, Eastern Texas Production Company junked and abandoned Belote 1, Charles Ames survey at 5980 feet. Operators had just completed a fishing job when a core barrel was lost.

Also in Cass County, 1½ miles northwest of production, Bay Oil Company's 1, G. Crowder survey, bottomed at 6050 feet, made 55 barrels daily on a railroad commission potential test last week through tubing. Well is being flowed by means of bottom-hole chokes with gas from the Hill zone bringing up oil from the Caddo Levee board section. Gas-oil ratio was 8600-1.

One half mile west of production on the Cass side of the field, H. L. Hunt, Inc., was installing pumping unit at I. N. Shelton 1, James Davenport survey, bottomed at 6050 feet. Well swabbed oil and salt water but would not flow.

R. W. Norton's Payne 1, SE SE Section 27-23-16, south of the Rodessa main fault in gas territory, and designed as a 10,000-foot test, last week was drilling below 6600 feet.

DEEP PAYS LOOM

In Lake Bistineau and Cotton Valley

Shreveport.—Opening deeper pay horizons in two North Louisiana fields loomed last week. From the lower Marine section, below the Travis Peak, which is the deepest producing level in this territory, promise is given of the discovery of an oil zone in Cotton Valley field of Webster Parish.

Ohio Oil Company, which several months ago opened Travis Peak production in this field, set casing in Bodcaw 1, C NE SE Section 28-21-10, after coring saturated oil sand from 8159-84 feet. Pipe was swung at 8670 feet. With elevation of 234.8 feet, the well logged the top of massive anhydrite at 4225 feet and the base of the stringer at 4546 feet. Location is about 1½ miles southwest of the company's Holloway 6, Travis Peak discovery from the 5500-foot level. This well went to below 8600 feet before plugging back to Travis Peak, and it also had a show of gas and oil from the 8100-foot level. The Bodcaw well was equipped to go to 10,000 feet if production had been found in drilling to 8600 feet.

In the small Lake Bistineau area of Bienville Parish, where several small gassers were completed some years ago, DeSoto Oil & Gas Company (R. O. Roy) opened a new horizon from basal Glen Rose lime with completion of Dunn and Olson et al 1, Section 15-16-10, at 5236 feet making an estimated 15 million cubic feet of distillate saturated gas. The company later was re-testing after lowering tubing.

Claiborne Parish Wildcat Flowing

E. T. Oakes et al's Patton 2, Section 1-20-5, Claiborne Parish wildcat whose completion during previous week opened a new producing area, continued to flow last week at the rate of about eight barrels hourly on 11/32-inch choke. It is bottomed at 5379 feet in basal Glen Rose lime. The operators may pull tubing and install liner in an attempt to increase the flow. Oil is 37.99 gravity.

Finding some oil and gas saturation in upper sections of the Glen Rose, Standard Oil Company of Louisiana's Fudicker 1, Section 2-17-9, 1½ miles southwest of production in the new Sibley gas-distillate field of Webster Parish, was drilling below 5545 feet, and due to reach the level from which three producers have been completed within the next 15 feet.

Offsetting to the north the second oiler in the Sligo district of Bossier Parish recently completed by the United Gas Public Service Company which continues to average better than 1000 barrels daily on a half-inch choke, Triangle Drilling Company spudded and was below 1200 feet on Skannal I Unit 1, Section 22-17-12. Offsetting this well to the north, United Gas spudded Freedman 1, Section 15-17-12. The oil pay was found just below 5200 feet in basal Glen Rose.

CARTHAGE ACTIVE

Area accounts for 2 new Panola County gas fields

Shreveport.—The new gas-distillate field northeast of Carthage, Panola County, Texas, last week added its second producer with the completion of Glassell & Glassell's Williamson 1, Coleman Survey, as an estimated 20 to 40-million-foot wet gasser from 5685 feet. It is 400 feet west of operators' Frost 1, discovery test. Massive anhydrite was logged in the well from 4635-4860 feet.

North of the shallow Bethany gas area of Panola County, Motex Oil Company plans to drill plug and perforate casing January 4 in Furrh 1, T. M. Alstone Survey, to test saturated sections reported from 4990-5017 feet and 5017-36 feet. Seven-inch casing is set at 5033 feet.

Magnolia Petroleum Company's Hull 1, T. Applewhite Survey of Panola County, east of Carthage, recently completed as an estimated three-million-foot daily wet gasser from 5960 feet to apparently open a new structure, has been taken over by the United Gas Public Service Company, owners of gas rights on the block.

In Harrison County, three miles north of Waskom, materials were being moved in by the Eastern-Shrevetex Oil Corporation for George Heirs 1, J. S. Powell Survey, planned to go to 5500 feet. It is on a block of about 6000 acres.

Two Big Strikes

DISCOVERIES AT EAST ALLEN LAKE AND MOSSER DOME

ROCKY MOUNTAIN FIELDS

WEEKLY STAFF REPORT

Casper, Wyo.—Just getting under the wire for 1936 strikes, two important discoveries were brought in during the past week in widely separated Rocky Mountain areas.

Christmas day saw the completion of the Medicine Bow Oil Company's Hintze-Government 1, CNE SW 18-22n-78w, for 25,000,000 cubic feet of gas daily, opening a new gas field for Wyoming. Location of the new gasser is on the East Allen Lake structure, a high on the southeast end of the Allen Lake Anticline in Carbon County, southern Wyoming. Production in the well is from the upper Sundance sand topped at 2033 feet with hole bottomed in formation at 2058 feet. The location is about 4½ miles southeast of the Ohio Oil Company's three commercial producers in Allen Lake field which supply gas to Laramie, Wyoming. Possibilities are high for development of oil production in this area, as the gas is found in the upper Sundance horizon with two untested sands below. These two lower Sundance sands are the main producers in the Big Medicine Bow field, 12 miles southwest.

The East Allen Lake structure was discovered by Dr. F. F. Hintze, professor of geology of the University of Utah and formerly chief geologist for the old Producers and Refiners Corporation. Dr. Hintze's recommendations were also principally responsible for the drilling of the northwest end of Allen Lake Anticline by the Ohio Oil Company, and it was through him that the Wertz Dome, which provided the only new oil field for Wyoming in 1936, was discovered. Prior to this the Wertz field had shown only gas.

Eighteen miles southwest of Billings, Montana, R. C. Tarrant's Sayre 1, NW NW SE 26-3s-24e, located on Mosser Dome, Yellowstone County, in the southern part of the state, was brought in this week for an initial rating of 100 barrels marking the opening of a new oil field for Montana and the Rocky Mountain territory. The new well is producing from the Dakota formation which was logged at 1010-36 feet with hole bottomed in the producing sand. Saturation was topped at 1020 feet. The first 24 hour test the well showed for 100 barrels, but on a later eight-hour test it made eight barrels per hour. Sayre 1 is 860 feet south of Tarrant's Mosser 1, which had an oil show in the Dakota at 995-1060 feet, but developed water in the formation on deepening. Mosser 1 was then deepened to the Madison at 2751 feet and encountered a water flow rated at 15,000 barrels daily. The well was saved for lease purposes. The structure on which the wells are located is a small dome closed by a fault.

To Try Jay Em High Again

Following closely on the heels of the failure of the Ohio Oil Company's Joseph A. Waggoner 1, CNE NE 14-28n-63w, on the Jay Em High, Goshen County, eastern Wyoming, the company has released location for another test to be drilled in the same general area soon. Red Cloud Cattle Company 1, NE NW 28-29n-62w and will use the equipment from Waggoner 1.

In Lance Creek field, Niobrara County, eastern Wyoming, Ohio Oil Company is moving in equipment for Carrie Putnam 7, NE SW 33-36n-65w. The company is running seven-inch liner to bottom in Agnes Rohlff 4, CSW NE 32-36n-65w, Lance Creek, which has been in the process of completion for several weeks. Production was boosted in the well from 40 to 87 barrels daily by running 11-inch wall scraper in the sand at 3864-3964 feet.

To Attempt Lance Creek Extension

Argo Oil Company's Ford 3, SW NW 33-36n-65w, important recent start in

NORTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO PARISH (La.) Side—		
Lion Oil Ref. Co., Wynn 6, 9-23-15	1100	6060
United Gas, Gipson 3, 15-23-16	900	5983
CASS COUNTY (Tex) Side—		
W. D. Ambrose, Chew 3, J. H. Rives sur	1000	5996
Magnolia, Rives 11, J. Collum sur.	1000	6010
Green 5, R. Trammell sur.	1000	6075
Noel Est. 2, W. B. Hughes sur.	1000	6080
Thornton Hrs. 1, W. Robinson sur	1400	6065
Texas Co., W. M. Hall 2, A. Archer sur	1100	6070
McLeod 2, W. A. Elliott sur.	1100	6088
United Gas, Bibby 3, A. Archer sur	1000	6050
Jones 10, B. J. Murray sur.	1100	6030
Rambo 7, J. Davenport	1000	6010

*Failures; †Junked; ¶Million cu. ft. gas.

MOUNTAIN STATES Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
MONTANA		
GLACIER COUNTY (Cut Bank Field)—		
Glacier Production Co., Hope Unit 1, cnw nw ne	¶5½	2688
Wallace 1, cne se	86	2937
COLORADO		
WELD COUNTY—		
Continental Oil Co., Briggs 2, cne sw 13-6n-61w	*	7042
WYOMING		
BIG HORN COUNTY (Garland Field)—		
Stock Oil Co., Griffin 1, ne ne ne 4-55n-97w	400	4200
FREMONT COUNTY (Wertz Field)—		
Sinclair-Wyoming Oil Co., Wertz 10-A, se nw 7-26n-89w	2400	5883
GOSHEN COUNTY (Jay Em-High)—		
Ohio Oil Co., Joseph A. Waggoner 1, cne ne 14-28n-63w	*	3052
SUBLETTE COUNTY (LeBarge Field)—		
Texas Co., California Petroleum Corp. (Utah) 97674-A, 4-B, cwl ne nw 34-27n-113w	8	863

*Failures; †Junked; ¶Million cu. ft. gas.

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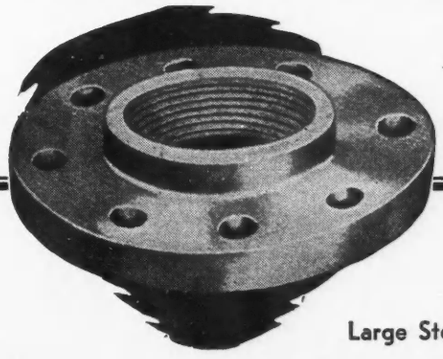

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Lance Creek field which offsets Ohio Oil Company's Carrie Putnam 5 to the north and the Agnes Rohlff to the east, has set the 12½-inch casing at 226 feet and is drilling at 1221 feet. The well is an outside location on the north side of the field.

The J. M. Huber Corporation has contracted to deepen Midwest 1, SE SE SW 27-36n-65w, Lance Creek, to the Sundance by March 1. The well was completed before for 50,000,000 cubic feet of gas initial in the Dakota sand at 3395-475 feet. The company is preparing to move in rotary equipment from Joss 2, NE NE SW 6-35n-65w an outside location on the west side of the field which is now drilling at 3495 feet in shale break after topping the first Sundance at 3862 feet.

Will Wildcat on Dry Mountain

Phillips Petroleum Corporation and Anderson-Kerr Drilling Company have moved into the Tri-State area and are preparing to drill a joint test of the Dry Mountain structure, Moffat County, northwestern Colorado. The structure is located about 20 miles southwest of Powder Wash structure on which the Mountain Fuel Supply Company brought in an excellent well three weeks ago. Completion of the Powder Wash well was the main reason for the drilling of the test by the two companies on the Dry Mountain structure. Location will be on Denise Permit, CSE SE 19-9n-99w. It is expected that Wasatch and Green river formations will be tested.

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The acreage block on the Dry Mountain area was orginally assembled by the former Midwest Refining Company and was acquired by the Phillips from Parker and Meyers of Denver and Rock Springs, who leased the acreage from the Stanolind Oil & Gas Company after that company acquired it through taking over Midwest. The structure is expected to show the Dakota at around 2500 feet because of non-conformity. Three miles to the west of the structure is a Dakota outcrop with an oil seep at the base of the formation.

One Active at Powder Wash

The Mountain Fuel Supply has suspended two wells for the winter in the Tri-State basin area, leaving only one active well for that area. Hal Stewart 1, CSW SW 32-12n-24e, on the Powder Wash structure, Moffat County, northwestern Colorado, is drilling at 335 feet after cementing the 12½-inch surface string at that depth.

In Hiawatha field, Moffat County, Mountain Fuel Supply Company has shut down Georgia Kuykendall 1, NE NE SE 22-12n-100w. The well has been plugged back from 2790 feet to 2527 feet and has set 4¾-inch casing at 2498 feet. The company's Lauzer 1, CNL NW NW 27-3n-24e, on the Clay Basin structure, Daggett County, northeastern Utah, has a derrick up but has been suspended for winter.

In Garland field, Big Horn County, northern Wyoming, Ohio Oil Company's Smith 2, W NW SE 35-55n-97w, is swabbing in with the 5¾-inch casing set at 4070 feet on top of Madison saturation. The hole is bottomed in the Madison at 4201 feet.

Stock Oil Company's Griffin 1, NE NE NE 4-55n-97w, has been completed for an estimated 400 barrels daily based on a short swabbing test. The well has been shut down with no actual production test being made. Production is from the Madison at 3854-4200 feet.

Wild Gasser Still Wild

The directional hole drilled to kill the gas flow from Stock Oil Company's Allen 1, SE NW 35-55n-97w, has stopped this week at 3800 feet and is pumping water at that depth under 8000 pounds pressure. So far the water has had no deadening effect on the wild well which is making about 60,000,000 cubic feet of gas daily. The gas flow is coming from the Embar-Tensleep zone at 3838 feet.

Sidney H. Keoughan and the Taylor Oil Company's Robinson 1, SW SW NW 24-56n-97w, Byron field, Big Horn County, is shut down at 2890 feet to lay water lines.

The Ohio Oil Company's Clarrissa Willey 1, SEC NE NE NW 25-56n-97w, Byron, is drilling in the Embar lime at 5414 feet with the seven-inch oil string set at 5250 feet. The company's State 1, NEC 35-56n-97w, Byron, is drilling at 3786 feet.

On the Carbon County, Montana side of the Elk Basin field, Henderson Producing Company's Elk 1-H-11, SE SE NW 35-9s-23e, is shut down at 725 feet because of weather. The well is being drilled as a test of the northern limits of the field.

A. J. O'ROURKE, district land man for Skelly Oil Company in West Texas, has been transferred from Midland to Wichita, Kansas, where he will occupy a similar position. The Midland vacancy will be filled by James Fitzgerald who has been district geologist.

New Field Found

WILDCAT PRODUCES 2626 BARRELS 37 GRAVITY OIL

WEEKLY STAFF REPORT

Los Angeles.—Standard Oil Company definitely proved the discovery of a new oil field by the completion of its K. C. 11-1, located 6½ miles north of the Ten Section oil field, and 14 miles west of Bakersfield. The well was completed December 22, flowing at the rate of 2626 barrels a day of 37 gravity oil. Lack of storage space required a gradual cutting back of production, and the present production is 310 barrels a day of clean oil and 393,000 cubic feet of gas flowing through a 1/64-inch choke. Tubing and casing pressures are 950 pounds and 1650 pounds, respectively. Total depth of the well is 7807 feet, with the top of the oil sand cored at 7742 feet. The 9⅝-inch water string was cemented at 7738 feet, and 105 feet of 7-inch liner, including 54 feet of 80-mesh perforations, was landed on bottom.

Strike Credited to Geophysics

The structure, which is near the center of the San Joaquin Valley, was found as the result of extensive geophysical exploration, and the well was drilled totally on the basis of that evidence. At the present stage of development it is impossible to state the trend or productive extent of the structure or the total thickness of oil zones. The oil sand from which this first well is producing is generally considered to be the equivalent of the Stevens zone, or upper producing horizon in the Ten Section oil field. Due to profound lithologic changes and the absence of intervening wells between these two structures, a definite correlation cannot be made. Due also to the total absence of both mega-fossils and micro-fossils, the exact age of the productive sands of either structure is not known. They are believed to lie near the base of the Santa Margarita series (upper Miocene) or near the top of the Monterey series (middle Miocene).

Barnsdall Oil Company appears to have discovered a new accumulation of oil in Rancho San Francisco 1, wildcat in the Newhall district, 50 miles northwest of Los Angeles. Shale with streaks of oil sand showing a considerable amount of gas was cored from 6000 to 6160 feet, and oil sand was cored from 6160 to 6215 feet. Preparations are being made to cement 8⅝-inch casing at 6000 feet. The well is located about 2 miles north of Pico Canyon oil field, which was one of the first productive oil fields of the state.

Three Wildcats Fail.

Superior Oil Company's Inglewood Extension 1, in the Fox Hills, 11 miles southwest of Los Angeles, is being abandoned after being cored to 9486 feet. The top of the basal conglomerate zone was cored at about 9475 feet and found to be barren. This project was a wildcat about 1½ miles east of Del Rey Hills oil field, in which the basal conglomerate zone is found at 6500 feet. It is the deepest well ever drilled in the Los Angeles Basin.

Signal Finance Corporation's Woods 1, wildcat, 14 miles southwest of Los Angeles and 5 miles southeast of Superior Oil Company's Inglewood Extension 1, above, was swabbed for a production test, but made practically all water with only traces of oil and gas. The water witch located the source of water at the shoe of the 6⅝-inch water string and the test is standing recemented. Total depth is 9395 feet, with 6⅝-inch casing cemented at 7128 feet, and 2225 feet of 4¾-inch liner, including 1000 feet perforated, landed on bottom.

Standard Oil Company's Bodger 1, wildcat 2 miles south of Signal Finance Corporation's Woods 1, above, was cored to 8044 feet in shale and gray sand and is being abandoned.

Use 4030 Feet of 11¾-Inch

In the tideland area of Huntington Beach, Vicaroo Oil Company's S. & G. 1-A was deepened from 5127 feet to 5240 feet, 235 feet of 6⅝-inch perforated liner was landed on bottom, and the well was recompleted on the compressor December 20, flowing 600 barrels a day of 24.3 gravity clean oil. The 11¾-inch water string is cemented at 4030 feet, and 1130 feet of 8⅝-inch liner, including 1097 feet perforated, is landed at the old bottom at 5127 feet.

Hogan Petroleum Company's Bankline-Symons 2, southeast of Mountain View oil field and 14 miles southeast of Bakersfield, was completed December 20, flowing at the rate of 1400 barrels a day of 30.6 gravity oil cutting 30 percent. Total depth is 6095 feet, plugged to 5965 feet, with 8⅝-inch water string cemented at 5154 feet. Production is 850 barrels a day oil and 750,000 cubic feet of gas, with a cut of 38 percent. Flow is through a 20/64-inch choke, with tubing and casing pressures of 280 pounds and 1400 pounds, respectively. This completion extends the proven limits of the field about ½ mile to the southeast.

In the Los Angeles Harbor area of Wilmington, General Petroleum Corporation's second well, Patton 1, was completed December 27, pumping 355 barrels a day of 15.6 gravity oil cutting 5.6 percent. Total depth is 3651 feet, plugged to 3600 feet, with 13⅜-inch water string cemented at 2495 feet and 8⅝-inch combination casing landed at 3600 feet and cemented through perforations at 3173 feet. Location is 4000 feet northwest from the discovery well, General Petroleum Cor-

CALIFORNIA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
DOMINGUEZ—		
Shell, Reyes 86	270	4699
INGLEWOOD—		
Standard, L. A. I. 81	1105	3550
RICHFIELD—		
Union, Chapman 38	110	3323
WILMINGTON—		
Selegna Oil Co., Minveg 1	120	3705
KERN FRONT—		
General Pet Corp., Young 42	160	1935
Seskaydon Oil Co., Sesnon 2	150	2920
GREELY FIELD—		
Standard, K. C. 11-1	2660	7807
FRUITVALE—		
Paul V. Kelley, Greely 1	225	3159
Tarr & McComb, Fee 4	250	3175
MIDWAY SUNSET—		
Union, Williams 3	475	1850
MOUNTAIN VIEW—		
Hogan Pet Co., Bankline 2	1450	6095
Wood Callahan Oil Co., Mullaney 2.	150	5253
MOUNT POSO—		
Texas Co., Vedder 11	540	1833
PREMIER—		
Roscoe & Stanley No. 1	75	2660
ROUND MOUNTAIN—		
Calif. Western, No. 19	300	1590
C. C. M. Oil Co., Coffee Canyon 7..	*	1707
TEN SECTION—		
Standard, K.C. 10-1	*	8900
KERN COUNTY—		
Hall-Baker Co., Tejon 1-10	*	2408
SAN LUIS OBISPO COUNTY—		
R. W. McBurney, No. 1	*	2150

*Failures; †Junked; ¶Million cu. ft. gas.

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poration's Terminal 1, which is producing from the same zone, flowing 1369 barrels a day of 20.5 gravity oil and 270,000 cubic feet of gas through ½-inch choke.

Premier oil field, 10 miles north of Bakersfield, was extended ½ mile north by completion of Roscoe & Stanley's Newhope 1 on December 20, pumping 75 barrels a day of 14.5 gravity oil cutting 10 percent. The base of the Etchegoin (lower Pliocene) was cored at 2485 feet, and the oil sand was cored 2540 feet to the bottom of the hole at 2660 feet. The 8⅝-inch water string was cemented at 2540 feet, and 125 feet of 6⅝-inch liner, including 100 feet of 140-mesh perforations, was landed at 2660 feet.

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SHREVEPORT, LOUISIANA

DUNDEE TEST HITS

Gladwin County wildcat may extend Buckeye

WEEKLY STAFF REPORT

Mt. Pleasant, Mich.—J. V. Wicklund Development Company's State A 1, SW SW NE, Section 11-18n-1w, three miles north and one mile west of the Buckeye township, Gladwin County, discovery Dundee well, flowed from 3596 feet, 62 feet in the Dundee lime, on December 27 before the hole was cased. Tanks were being set and five-inch casing run for a test the last of the week, with the test looming as important as either opening a new closure in Buckeye or as an extension.

Chartiers Oil Company completed the Archbold 1, Section 8-16n-4w, Isabella County, south offset to same company's Currie 1, a discovery well in Section 5-16n-4w, for 460 barrels initial after acid. The test is producing against 290 pounds back pressure on casing head. Currie 1 initialed 980 barrels against 450 pounds pressure after acid. The same company's west offset to the Currie 1, the McIntosh 1, Section 6-16n-4w, failed to show commercially in the Dundee and went into black water 100 feet in the lime.

Daily Crude Oil Company completed Weatherby 1, Section 20-12n-9w, Montcalm County, a wildcat, for a 28 barrel daily average pumper after acid at 3324 feet, 11 feet in the Monroe lime. Operators this week were having trouble producing through tubing and planned to pull and re-set.

Offset tests to both Pure Oil Company's Embrey 1, Section 34-15n-6w, Isabella County; and McClanahan Oil Company's Seignious 1, Section 3-20n-4e, Arenac County, discovery wells in wildcat districts, were due to test Dundee lime last of this week.

EASTERN FIELDS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
OHIO		
ASHLAND COUNTY—		
Ohio FG Co., W. W. Strang 1.....	¶	2984
BELMONT COUNTY—		
Mike Hardwick, John S. Moore 1...	*	1230
COSHOCTON COUNTY—		
Preston Oil Co., J. L. Myers 2.....	35	3033
GUERNSEY COUNTY—		
Geo. Jewell & Co., W. T. Brothers 2	¶	1255
HOLMES COUNTY—		
Ohio FG Co., Leonard Mulhall 1....	¶	3373
HURON COUNTY—		
McCorkhill & Co., Mary A. Park 1..	¶	823
LAWRENCE COUNTY—		
Shale Dev. Co., First Hunt'ngton Nat'l Bank 1	¶	2415
LICKING COUNTY—		
McClay Bros., Geo. Boyd 3.....	25	2978
Armbruster Stricker, Sarah Patten 5	10	630
LORAIN COUNTY—		
Ohio FG Co., Stanslawski 1.....	¶	3200
MEIGS COUNTY—		
Ohio FG Co., Bertha Pownall 1....	¶	979
MORGAN COUNTY—		
Barnesville Dev. Co., Jas. Danford 1	*	1534
NOBLE COUNTY—		
Ullman & Co., Cathern Frank 3....		885
STARK COUNTY—		
East Ohio Gas Co., Price Community 1	¶	4326
TUSCARAWAS COUNTY—		
Geo. Jewell & Co., Frank B. Kinsey 2	¶	1209
VINTON COUNTY—		
Kelch Bros., Lewis P. Backus 5...	¼	832
WAYNE COUNTY—		
Ohio FG Co., Coll Wooster 1.....	¶	3098
Harmon & George, Jennie Kime 1..	¶	3098
GREENE COUNTY—		
East Ohio Gas Co., A. & M. Wise 2	¶	4095
WEST VIRGINIA		
PLEASANT COUNTY—		
Feeney Oil Co., Cornerll 1.....	4	1935
United FG Co., H. C. Walker 4639	¶	....
KENTUCKY		
HENDERSON COUNTY—		
Ranger Oil Co., C. M. Gish 11....	10	....
C. M. Gish 12	16	....
McLEAN COUNTY—		
M. & A. Hatchett, Barrett & Helt 1	50	....
OHIO COUNTY—		
DeHart & Co., O'Dell Heirs 15.....	*	....

*Failures; †Junked; ¶Million cu. ft. gas.

GAS EJECTS CASING

Michigan test scatters 18 joints of 10-inch pipe

Mount Pleasant, Mich.—A 680-foot string of 10-inch casing on Gulf Refining Company's Kainder 1, Section 10-20n-4e, Clayton township, Arenac County, was ejected 70 percent out of the hole, scattering 18 joints around the lease like jackstraws.

Operators had set 250 feet of 14-inch drive pipe and run the 10-inch string to temporarily shut off a cave and water sand around 550 to 600 feet, and then deepened to 1150 into heavy gas pressure in the Berea sand. The blowout occurred while mudding off the gas. No one was injured, but the 18 joints that wound out the hole ripped off the crown blocks and took out two rig girts and damaged a cementing truck.

The major damage of the blowout was expected to be the difficulty in saving the hole. About 290 feet of the 10-inch casing dropped back and possibly collapsed in the hole.

McClanahan Oil Company may deepen Mee 1, Section 11-20n-4e, 1½ miles southeast of the Seignious discovery, with the test showing 300 feet of fluid after standing five days. Hole was bottomed at 2630 feet after logging Dundee lime at 2467 feet. The company's Robinson 1, Section 31-17n-4w, Clare County, 1¼ miles northwest extension of the Chartiers-Currie discovery in Section 5-16n-4w, Isabella County, logged Dundee lime 19 feet higher than the Currie at 3929 feet but had drilled 78 feet into the lime on December 22 without picking up commercial production.

DAMAGE SUIT ENDS

Brine pollution charges dropped

Mount Pleasant, Mich.—First damage actions brought by riparian landowners in Michigan against oil development companies on charges of damages from oil field brine pollution, were settled out of court after going two weeks before Judge Ray Hart in the Isabella Circuit Court.

Twenty-seven Vernon and Wise town-

ship farmers of Isabella County filed suits against 13 operating companies in the Vernon field claiming $56,000 damages to fields, trees, livestock and fresh water wells. Terms of the settlement out of court were not made known.

The specific suit before the court when settlement was made was against the Mammoth Petroleum Corporation. The settlement involved withdrawal of all the suits.

Meanwhile, the state conservation department this week ordered one operating company in the new Clayton township Arenac County area to suspend drilling operations until specified brine control measures are taken.

THE OIL WEEKLY REPORT ON IMPORTANT *Wildcat Tests*

MICHIGAN
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARENAC COUNTY—		
Central Drilling Co.'s Fisk 1, sw ne se, 16-19n-4e	*	2690
CLARE COUNTY—		
McClanahan Oil Co.'s Robinson 1, sw sw sw 31-17n-4w	*	4032
GLADWIN COUNTY—		
M. F. Whitehill's Welker 3, nw nw sw 2-17n-2w	26	3935
Muskegon Development Co.'s Wineman 1, sw sw se 33-18n-1e	*	3677
GRATIOT COUNTY—		
Redman Oil Co.'s Duckworth 1, ne ne sw 9-11n-3w	*	3308
Wiser Oil Co.'s Plowfield 1, c se sw, 2-10n-4w	¶1½	999
W. E. Ross' Browne 1, c se se, 3-10n-4w	¶10	1009
Hyatt & Norton's Pechtel 1, c se sw, 3-10n-4w	¶18	995
ISABELLA COUNTY—		
Charitiers Oil Co.'s McIntosh 1, c s½ se se, 6-16n-4w	*	4026
Archbold 1, c n½ nw nw, 8-16n-4w	465	3930
LIVINGSTON COUNTY—		
E. J. Turner's Hass 1, ne, 6-4n-3e	*	990
MIDLAND COUNTY—		
Pure Oil Co.'s Bond-Root 14, c nw, 2-13n-2w	110	3440
Rex Oil Co.'s Howland B-2, ne nw sw, 23-13n-1w	70	3419
MONTCALM COUNTY—		
Daily Crude Oil Co.'s Weatherby 1, sw sw se, 20-12n-9w	28	3324
MUSKEGON COUNTY—		
Wolverine Natural Gas Co.'s Cooper 1, sw nw nw, 31-9n-14w	*	2600
West Michigan's Bossett 1, c nw, 8-9n-14w	¶1	1290
GRATIOT COUNTY—		
Wiser Oil Co.'s Townsend 2, c ne nw 10-10n-4w	¶6¼	1011
HILLSDALE COUNTY—		
Jacob Beck's Fee 1, nw nw se, 16-6s-3w	*	3502
ISABELLA COUNTY— *		
J. V. Wicklund's Marcellies 1, sw ne nw, 23-16n-4w	*	3906
Mammoth Prod. & Ref.'s Thayer 6, ne nw sw, 23-16n-4w	720	3789
MECOSTA COUNTY—		
Taggart Bros.' Fee 30, c sw se, 11-11n 9w	¶¾	1506
MIDLAND COUNTY—		
Pure Oil Co.'s Naramore 26, sw se ne, 16-13n-1w	50	3436
MONTCALM COUNTY—		
Burnstein Oil Co.'s Kirker B-1, se sw nw, 36-11n-5w	110	3189
Daily Crude Oil Co.'s Fulford B-2, sw ne ne 35-11n-5w	210	3199
SAGINAW COUNTY—		
Hubel Oil Co.'s Schwigner 1, nw ne sw 5-11n-6e	*	3340
Jenickie Oil Co.'s Moulton 1, sw nw sw, 31-12n-2e	*	3240
Monitor Oil Co.'s Turnwald 1, se se ne, 32-9n-4e	*	2860
ST. CLAIR COUNTY—		
Pyramid Oil Co.'s Draper 3, Pv. Claim 244-7n-17e	*	590
M. D. O. Co.'s Fee 1, ne se sw, 33-7n-17e	*	645

*Failures; †Junked; ¶Million cu. ft. gas.

CALIFORNIA

FRESNO COUNTY

CANTUA CREEK—Western Gulf Oil Co.'s S. P. Land Co. 3, 3-17-15, td 8531 ft, redr 7810 ft.

KERN COUNTY

LERDO—Arkelo Pet. Co.'s No. 1, 23-28-26, dr silty sand 7168 ft.

RIO BRAVO—Associated's K.C.L. 1, 30-29-25, td 7683 ft, co 7358 ft.

LOST HILLS—Associated's Elliott 8, A-3, 11-26-20, td 1218 ft, plug 1150 ft, dr gray sand; Williamson 12-A-3, 11-26-20, td 1675 ft, to deepen. Lincoln Pet. Co.'s No. 1, 12-26-20, td 1846 ft, plug 1140 ft, bailing; Theta 2, 12-26-20, sd 2830 ft. Standard's United 2, 2-26-20, dr os 1591 ft.

SO. MARICOPA—E. A. Bender's Robinson 1, 14-10-23, td 1235 ft, plug 750 ft, sd. Trans-Line Pet. Corp.'s No. 1, 3-10-23, dr hard shale 550 ft.

GREENFIELD — British American's Smith 1-A, 21-31-27, td 1128 ft, wocs 20-in on bottom.

GRAPEVINE—Buffalo Oil Co.'s Tejon 1, 5-10-19, (formerly 99 Oil Co.), dr sandy shale 896 ft. Hall-Baker Co.'s Tejon 1-10, 12-10-19, td 2408 ft, zone from 1800 to 2000 ft, wet, abn. Ohio Oil Co.'s Title Ins. D-1, 21-11-19, dr sandy shale 6194 ft. Reserve Oil & Gas Co.'s Ritchie 33-1, 33-11-19, sd 6030 ft; Tejon 33-2, 33-11-19, sd 4505 ft; Tejon 33-3, 33-11-19, dr sand and shale 2824 ft.

SAN EMIDIO—I. L. Burch's No. 1, 3-10-23, td 2460 ft, tested 1465 to 1510 ft, recovered 800 ft, gas cut mud, sd.

MOUNT POSO—Calcoast Oil Co.'s No. 1, 36-26-27, sd 2655 ft.

DEVIL'S DEN—Den Pet. Co.'s Bates 1, 26-25-19, dr brown shale 2214 ft. H. C. & E. A. Long's No. 1, 20-25-19, sd 715 ft. Lube Oil Co.'s No. 1, 2-25-18, dr shale 1350 ft.

JASMINE—Doyle Pet. Corp.'s Quinn 1, 15-25-27, td 2956 ft, plug 2882 ft, sd.

EAST EDISON—East Edison Oil Co.'s Tejon 1, 21-30-30, td 1044 ft, rust; No. 2, 22-30-30, lcn.

MOUNTAIN VIEW — Mohawk Pet. Co.'s Earl Fruit 2, 10-31-29, td 6164 ft, pumping 60 bbls, 26 gravity oil, cut 60 percent; Earl Fruit 3, rur. Shell's Greer 1, 15-31-29, td 6171 ft, plug 6148 ft, sd.

KERN FRONT—Seskayden Oil Co.'s No. 3-A, 17-18-27, rig.

TEN SECTION—Superior Oil Co.'s K.C. L. 8, 11-30-26, dr hard shale and gray sand 8686 ft.

WASCO—Continental Oil Co.'s K.C.L. A-1, 8-27-24, td 6503 ft, co.

ARVIN—General Pet. Corp.'s No. 1, 26-31-29, td 7462 ft, recement 8⅝ in at 6570 ft. Superior Oil Co.'s No. 1, 26-31-29, foundation.

MISCELLANEOUS

HUMBOLDT COUNTY—Texas Co.'s Eureka 2, 22-3-1, dr Pliocene shale 7124 ft.

KINGS COUNTY—Associated's Avenal 2, 35-23-17, dr shale 798 ft. A. S. Clare's Laymance 1, 26-20-22, rig. Milheim Oil Corp.'s Resources 1, 20-22-22, td 5810 ft, redr at 5100 ft.

SAN BENITO COUNTY — Associated's Murphy Ranch 1, 5-12-4, td 4784 ft, redr at 4671 ft.

SAN JOAQUIN COUNTY—Standard's Tilden Com. 1, 31-2-5, foundation.

SOLANO COUNTY—Amerada Pet. Corp.'s Hamilton 1, 26-4-2, td 6792 ft, plug 4304 ft, standing cemented; Hoppe 1, 22-4-2, sd 7029 ft; Serpa 1, 23-4-2, dr sandy shale 3620 ft.

SUTTER COUNTY—Buttes Oil Fields' Sutter 1, 2-15-1, td 4676 ft, formation tester 4650 to 4676 ft tested wet.

TULARE COUNTY—J. W. Alford's Williams 1, 28-16-23, sd 1023 ft; R. R. Ellis' Ellis 1, 20-24-23, rig. E. P. Jennings No. 1 (Alpaugh) 4-24-23, sd 2820 ft. Seaboard Oil Corp.'s Security 1, 16-23-26, rur. Trico Oil & Gas Co.'s Calif. Western 1, 2-23-23, sd 1800 ft.

MONTEREY COUNTY — Amil A. Anderson's No. 1, 15-24-14, spud Dec. 21, dr. Shell's Branch 2, 34-24-10, td 5115 ft, fsh. Texas Co.'s Dunphy 1, 30-19-7, dr shale 750 ft.

SAN LUIS OBISPO COUNTY—Aviation Oil Co.'s Brintnall 1, 10-11-35, sd 988 ft. Cholame Synd.'s Jack 2, 10-25-15, td 3648 ft, fsh. A. T. Jergins Trust's Indian Knob 1, 26-31-12, td 1450 ft, trying to regain circulation. R. W. McBurney's No. 1, 23-32-22, td 2150 ft, abn. Union's Porter 1, 22-32-15, dr hard shale 3928 ft. United Foreign Oil Co.'s Panorama 2, 2-32-21, dr hard sand 2425 ft.

SANTA BARBARA COUNTY

EL CAPITAN—Associated's Edwards Estate 1, 2-4-30, td 2450 ft, plug 2370 ft, bailing water, trace of oil.

SUMMERLAND—Julia Dietzman's Fithian 1, 8-4-25, sd 1025 ft.

GATO RIDGE—O. C. Fields Gaso. Corp.'s Continental 1, 4-8-32, rur. Ben Moyle's Arrata 1, 9-8-32, foundation. Petrol Corp.'s Tognazzini 1-A, 9-8-32, dr hard shale 1340 ft. Todos Santos McLoney 1, 4-8-32, sd 50 ft.

LOMPOC—O. C. Fields' Santa Rita 1, 11-7-33, td 2064 ft, to resume dr. Top Row Oil Co.'s Spanne 1, 6-35, sd 1310 ft.

CUYAMA AREA—Daniel Fisher's No. 1, 28-11-28, dr shale 575 ft.

CASMALIA—Golden Bear Oil Co.'s No. 1, 20-9-34, rig. Valley Oil Co.'s Chief 1, 20-9-34, rur. Todos Santos Oil Co.'s No. 1, 29-9-34, td 2365 ft, plug 1705 ft, sd.

BETTERAVIA—E. H. Moore's Union Sugar A-1, 25-10-35, td 8020 ft, fsh.

POINT CONCEPCION—101 Oil Co.'s Hollister 1, 35-5-33, sd 358 ft.

SANTA MARIA—W. D. Shaffer's Houk 1, 9-9-33, td 1705 ft, wocs 11¾ in at 1700 ft.

VENTURA COUNTY

PIRU—Associated's Wiley Canyon 1, 6-3-18, dr shale 3215 ft. Bolsa Chica Oil Co.'s Hidden 1, 5-4-18, rur.

OXNARD—Vaca Oil Explor. Co.'s Calif.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*	owdd—*old well drilling deeper.*
‡—*salt water (completions).*	owpb—*old well plugging back.*
†—*junked and abandoned.*	pb—*plugged back or plugging back.*
¶—*million feet of gas.*	r—*reaming.*
abd—*abandoned.*	rog—*rig on the ground.*
bbls—*barrels.*	rur—*rigging up rotary tools.*
br—*building rig.*	rust—*rigging up standard tools.*
b.s.—*basic sediment.*	sd—*shut down.*
csg—*casing.*	sdtr—*sidetracking.*
co—*cleaning out.*	sg—*show gas.*
dd—*drilling deeper.*	si—*shut in.*
dk—*derrick.*	so—*show oil.*
dr—*drilling.*	so&g—*show oil and gas.*
fsg—*fishing.*	spd—*spudding.*
ft—*feet.*	sr—*straight reaming.*
hfw—*hole full of water.*	sw—*salt water.*
in—*inches.*	td—*total depth.*
lcn—*location.*	ur—*underreaming.*
m—*milling.*	wih—*water in the hole.*
mim—*moving in materials.*	wo—*workover.*
mit—*moving in tools.*	wocs—*waiting on cement to set.*
mot—*milling on tools.*	wosr—*waiting on standard rig.*
n, s, e, w—*north, south, east, west.*	
oih—*oil in hole.*	

Lands 1, 6-1-21, td 2830 ft, plug 2150 ft, bailing.

VENTURA—Ventura Explor. Co.'s Sexton 1, 30-3-22, sd 9525 ft.

SOUTHERN CALIFORNIA

NEWHALL—Barnsdall's Rancho S. F. 1, 26-4-17, td 6215 ft, top oil sand 6160 ft, to set 8⅝ in casing. Holbrook Pet. Co.'s Newhall L&F Co. 1, 28-4-16, sd 4025 ft.

LYNWOOD—Calizoo Oil Co.'s Saulque 1, 9-3-13, td 3995 ft, pipe stuck, circulating oil.

LOS ALAMITOS—Calmont Oil Co.'s Montana 1, 14-4-12, lcn.

WHITTIER—W. H. Clayton's No. 1, 22-2-11, td 830 ft, pumping 20 bbls gross.

NO. LONG BEACH — Geo. L. Clayton's Clayton 1, 32-3-12, dr hard shale 2130 ft.

FOX HILLS—Country Club Oil Co.'s No. 1, grading lcn.

EAST WHITTIER—Drillers Inc.'s No. 1, 22-2-11, spud Dec. 16, dr.

CLEARWATER—H. Heides' Rogers 1, 20-3-12, rur.

MONTEBELLO—Honolulu Oil Corp.'s Core Hole 1, 14-2-12, dr shale 2402 ft.

PUENTE—Honolulu Oil Corp.'s Butler 1, 15-2-10, rur.

WALNUT—Julian & Criswell's Langstaff 1, 5-2-9, dr shale 950 ft.

PALOS VERDES HILLS—McClaren Bros.' No. 1, 27-4-16, td 3992 ft, to deepen.

ROSECRANS—Shell's McKinley 4-1, 20-3-13, dr sand and shale 4550 ft.

HAWTHORNE — Signal Finance Corp.'s Woods 1, 10-3-14, td 9395 ft, ran 2225 ft of 4¼ in liner to bottom, 1000 ft perforated, swabbed water, trace of oil, located water in perforated section, put in squeeze job.

PALOS VERDES—So. Calif. Dr. Co.'s Burkhard 1, rur.

GARDENA—Standard's Bodger 1, 22-3-14, dr sandy shale 8035 ft. Universal Cons. Oil Co.'s Carrell 1, 36-3-14, dr sand and shale 6620 ft.

FOX HILLS—Superior Oil Co.'s Inglewood Ext. 1, 25-2-15, dr shale 9496 ft.

DAVIDSON CITY — C. G. Willis' Flood Control 1, 11-4-15, dr gray sand 4372 ft, oil sand 4284 to 4338 ft.

ORANGE COUNTY — Calif. Eastern Oil Co.'s Verde 1, 31-3-9, td 4750 ft, may abn. Mesa Oil Co.'s Mesa 1, 29-6-10, dr hard shale, streaks sand, 4190 ft. West Coast Ref. Co.'s Yerba 1, 25-3-9, td 2725 ft, redr at 2350 ft.

SAN BERNARDINO COUNTY—Equitable Pet. Explor. Co.'s No. 1 (near Barstow), td 2300 ft, plugged off bottom, to test. Tehama Pet. Co.'s Kraemer Backs 2, 33-2-8, dr hard shale 1275 ft; Pellissier 1, 4-3-8, sd 1312 ft, rig burned.

KANSAS

BARBER COUNTY—Sinclair Prairie's Gentry 1, ne ne ne 1-33s-15w, td 5529 ft, D&A. Pure Oil Co.'s Palmer 1, se ne sw 10-33s-10w, cor 4726 ft.

BARTON COUNTY—C. L. Price' Deutsch 1, nw nw ne 16-16s-13w, Pot P 939 bbls oil and sw, 20 hrs, comp. Minnehoma O&G Co.'s Smith 1, nw nw ne 20-18s-13w, set 8-in csg 3112 ft, rust. Duee & Brouk's Baker 1, ne se sw 16-17s-13w, dr 1310 ft. Freehorn et al's Sooy 1, nw nw ne 27-18s-12w, sd 200 ft. John Burton's Wendel 1, ne ne ne 13-19s-11w, dr 2810 ft. I. T. I. O. Co.'s Schrepel 1, se se ne 26-20s-11w, dr 595 ft. Armer & Vernon O&G Co.'s Ainsworth 1, ne ne se 33-16s-13w, Pot P 1241 bbls oil 24 hrs, comp. D. R. Buchanan et al's J. Schartz, Jr., 1, nw nw ne 20-19s-11w, set 10-in csg 518 ft.

BUTLER COUNTY—Wixon et al's Coulter 1, nw sw ne 3-27s-7e, dr 2225 ft. Cox & McGinnis' Faulders 1, sw sw ne 27-25s-3e, mi mach.

CHASE COUNTY—Hanna et al's's Brothers 1, se se nw 25-20s-8w, rig.

COWLEY COUNTY—Home Natural aGs Co. and McNish' Werner 2, se se sw 31-32s-6e, 2,500,000 c.f. gas, comp. Tom Palmer's Pierce 1, se se sw 14-31s-3e, dr 3323 ft. Austin & McKnabb's Wilson 1, ne ne se 20-32s-6e, dr 2400 ft. C. H. Cross' Cook 1, sw sw sw 6-32s-6e, ur 8-in csg 1904 ft. Simpson Oil Co. & Stanolind O&G Co.'s Weigle 1, sw sw ne 18-31s-6e, dr 1230 ft.

DECATUR COUNTY — Winkler & Koch's Vessey 1, cnw se 26-3s-26w, pb 1023 ft, dr 1490 ft.

EDWARDS COUNTY—Stanolind & Elwell's Donovan 1, cse se 14-25s-18w, dr 4846 ft.

ELLIS COUNTY—Empire's Samuelson 1, ne ne se 31-11s-16w, woc. Ted Kerr et al's Koblitz 1, se sw nw 23-12s-18w, sw 73 bbls oil, 3 hrs, sd; sw 6 bbls oil 1 hr, sd. Taylor et al's Emery 1, ne ne ne 23-14s-18w, sdo. Murphy Oil Co.'s Wiesner 1, se se sw 12-14s-19w, fsg 1275 ft. Jones Bros. et al's Phillips 1, se se nw 9-15s-17w, dr 2875 ft. Lario O&G Co.'s Cress 1, ne ne ne 13-11s-17w, dr 2775 ft.

ELLSWORTH COUNTY—Empire's Brown 1, se se nw 1-17s-9w, dr 2605 ft.

GREENWOOD COUNTY—Scott et al's Pedroja 1, se ne se 6-26s-10e, testing. Holis et al's Boone 1, ne ne nw 21-26s-12e, woc. Ohio's Schwab 1, se sw se 9-24s-10e, ru mach.

HARVEY COUNTY—Saco et al's Guthrie 1, ne ne nw 8-22s-2e, set 8-in csg 2765 ft, co.

KEARNEY COUNTY—J. L. Murphy et al's Campbell 1, nw nw sw 32-25s-35w, testing.

LOGAN COUNTY—Rosespring Drlg. Co.'s Wright 1, cse se 12-15s-35w, fsg 3909 ft.

LYON COUNTY—Clyde Fred et al's Bruce 1, nw nw nw 13-18s-10e, dr 1575 ft.

MARION COUNTY—Western Kansas O&R Co.'s Hauser 1, sw sw sw 19-19s-4e, td 2644 ft, D&A.

MITCHELL COUNTY—Geo. Siedhoff et al's Greiss 1, sw sw se 16-8s-10w, dr 1903 ft.

PAWNEE COUNTY — Kessler & Their's Wallace 1, se se nw 16-23s-15w, dr 400 ft.

PRATT COUNTY—H. V. Elwell et al's Fay 1, nw nw se 15-27s-14w, fsg 3500 ft.

RENO COUNTY—Foraker et al's Hiett 1, se sw ne 34-24s-4w, sd 3800 ft. Inca Prod. Corp.'s Moore 1, cne ne 26-24s-3w, td 3091 ft, D&A. Empire's Schrock 1, nw nw ne 22-24s-5w, dr 3367 ft. Westgate-Greenland Oil Co.'s Fossey 1, sw sw se 12-22s-8w, dr 3755 ft. W. E. Witt et al's Wright 1, se ne ne 9-23s-8w, brr. Helmerich & Payne et al's Stewart 1, se se ne 16-24s-6w, rot rig.

RICE COUNTY—Carlock et al's Deweese 1, sw nw nw 32-20s-7w, dr 3377 ft. Shell Pet. Corp. et al's Soenken 1-A, cnw 10-19s-9w, sw 175 bbls oil and 175 bbls water, 8 hrs. Aylward et al's Johnson 1, nw nw ne, Pot 2818 bbls oil, 24 hrs, comp. I. T. I. O. Co.'s Fossey 1, sw sw ne 31-20s-10w, dr 2015 ft. Charles Pet. Corp.'s Speck 1, nw nw se 29-20s-8w, td 3672 ft, D&A. Permian Oil Co.'s Monroe 1, cne ne 9-20s-7w, woc. Dickey Oil Co.'s Brothers 1, se se se 1-21s-7w, dr 1465 ft. Sage et al's Patton 1, sw sw sw 5-21s-7w, Pot. F 1560 bbls oil, 24 hrs.

ROOKS COUNTY—J. A. Shoemake's Stebbins 1, ne ne sw 26-7s-17w, testing. Buckner & Schoff's McConnell 1, ne ne ne 34-6s-18w, co 1765 ft. Empire's Ham 1, sw nw nw 24-8s-19w, dr 3570 ft. Snowden & McSweeney's Hindman 1, ce½ nw 35-7s-17w, woc 2780 ft. Graham et al's Fike 1, sw sw sw 9-9s-17w, rust 3220 ft.

RUSH COUNTY — Schoenfeld & Kitch' Winget 1, se se se 15-16s-16w, dr 3104 ft. H. M. Pigott et al's Maresch 1, cnw nw 28-19s-19w, woc 170 ft.

RUSSELL COUNTY — Empire's Frederick 1, se se se 18-15s-11w, dr 2640 ft. Equity Gas Co.'s Harbauk 1, nw ne sw 19-13s-12w, woc. El Dorado Ref. Co.'s Scott 1, nw nw ne 17-13s-13w, rust 3278 ft.

SALINE COUNTY—James Brouk et al's Tehlander 1, ne nw se 10-16s-13w, pb 3440 ft, set 5-in csg 3388 ft. Ryan Consolidated's Wuerth 1, sw sw nw 28-14s-2w, ru mach.

SHERIDAN COUNTY—O. A. Roberts et al's Corrick 1, cnw 34-9s-26w, dr 3030 ft.

STAFFORD COUNTY—Skelly's Kipp 1, se se ne 27-25s-14w, pb 3914 ft, set 7-in csg 3825 ft. C. E. Skiles et al's Leidigh 1, nw nw sw 21-22s-11w, td 3653 ft, D&A. Empire's Jordan 1, sw sw nw 15-25s-14w, to dd. Skiles et al's Hughes 1, sw sw sw 12-23s-12w, dr 2390 ft. Lebow et al's Wolf 1, se sw nw 3-21s-12w, dr 2563 ft. Stanolind O&G Co.'s Rosacker 1, sw sw ne 5-25s-11w, woc 230 ft.

SUMNER COUNTY—Rosespring Drlg. Co.'s Rutter 1-A, cnw nw 21-33s-2e, F 75 bbls oil every 12 hrs. Empire's Hoffman 1, nw nw sw 27-34s-1e, co 3708 ft. Fraham et al's Dawson 1, nw nw nw 4-33s-2w, dr by 2750 ft. Lario et al's Hall 1, nw sw nw 11-35s-1e, dr 2310 ft. Lloyd, Frost, Study et al's Fee 1, se se se 31-34s-1e, dr 2650 ft. Orcott & Stewart's Newton 1, se se se 21-30s-2e, dr 840 ft. Wakefield & Mead Oil Co.'s Napp 1, sw sw nw 2-34s-5e, ru.

TREGO COUNTY—York State Oil Co.'s Gugler 1, sw sw sw 36-12s-21w, sdo. Black Gold Oil Co.'s Allman 1, csw sw 34-14s-21w, rot rig.

WOODSON COUNTY—Ross & Marshall's Bresner 1, sw sw se 6-26s-16e, ru. Reamer's Corn 1, ne ne ne 31-26s-15e, sd 1680 ft.

SOUTH LOUISIANA

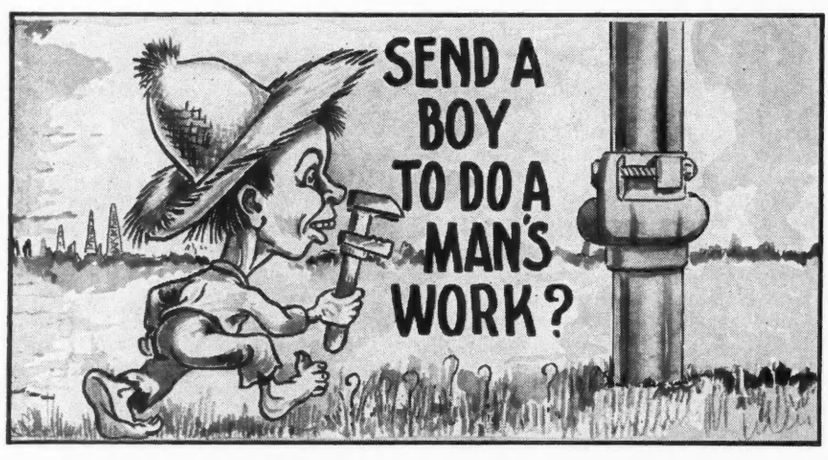
ACADIA PARISH—Humble's Nordyke 1, Ebenezer prospect, 23-10s-1e, dr shale 6344 ft. Superior's Savoie 1, Bayou Mallet field, 47-7s-1e, dr shale 6735 ft.

CALCASIEU PARISH — Union Sulphur's Irwin 1, se of Lake Charles, 10-10s-8w, coring 8472 ft.

CAMERON PARISH—Pure's Mallard Bay 1, Mallard Bay prospect, 22-13s-3w, woc 7906 ft.

EAST BATON ROUGE PARISH—Louisiana Crusaders Oil Co.'s L. S. U. 1, University Block, 67-7s-1w, dr shale 7054 ft.

IBERIA PARISH—Texas Co.'s Fausse Point 2, Fausse Point prospect, 35-11s-8e, dr shale 6742 ft; same operator's State Vermilion Bay 1, in Vermilion Bay, 16s-5e, running an electrical logging device 9943 ft.



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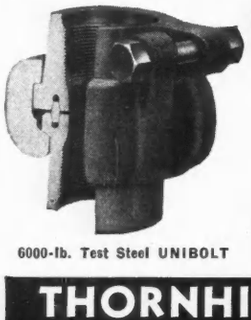

6000-lb. Test Steel UNIBOLT

And no wonder a boy could easily do it. Every pound applied to the bolt exerts approximately 40 pounds* on the seat. Here's how: The interlocking 9-degree tapered shelves provide approximately 6½ to 1 multiplication of pressure applied to the bolt, and an equal multiplication results from the 9-degree taper on each side of the seal ring.

* Less friction.

THORNHILL CRAVER CO.
Houston UNIBOLT Texas

JEFFERSON PARISH—Triangle Oil Co.'s Carroll 1, 125-12s-11e, sd 1903 ft.

JEFFERSON DAVIS PARISH — Shell's Sturdevant 1, South Roanoke prospect, 25-10s-4w, fsh 9749 ft. Stanolind's Calcasieu National Bank 1, China prospect, 28-7s-3w, dr clay 25 ft.

LAFOURCHE PARISH—Wm. Helis's City of New Orleans 1, Marchland prospect, 19-23s-23e, dr shale 5745 ft. Pan American's Harange 1, Valentine prospect, 7-17s-20e, preparing to comp at 6974 ft.

ST. BERNARD PARISH—Gulf's Lake Lery 1, Lake Lery prospect, 28-14s-14e, dr shale 3145 ft. Southern Sulphur Co.'s State 2, in Lake Borgne, 38-14s-15e, sd 1420 ft.

ST. LANDRY PARISH—Superior's A. Savoie 1, ne of Bosco, 26-8s-3e, washing after perforating from 5320 to 5323 ft.

ST. MARTIN PARISH—Shell's Hefea Land Co. 1, Gecho or Arnaudville prospect, 38-8s-5e, coring sandy shale 8322 ft.

ST. MARY PARISH—Texas Co.'s Bayou Sale 1, Wax Lake prospect, 40-17s-9e, dr shale 9545 ft.

TERREBONNE PARISH—Humble's Elender 1, Houma gas field, 23-19s-19e, reaming 8757 ft. Shell's Realty Operators 1-B, 11 mi w of Houma, 18-18s-15e, dr shale 6787 ft.

VERMILION PARISH—Continental's Hebert 1, Abbeville prospect, 20-12s-3e, woc 11,795 ft. Stanolind's Fred Stovall 1, South Abbeville prospect or Inter-coastal prospect, 89-14s-3e, dr shale 10,512 ft.

MICHIGAN

ARENAC COUNTY — American Drilling Co.'s Mutch 1, 14-20n-4e, sd 1290 ft. Fortney Oil Co.'s Reeder 1, 16-20n-4e, dr 800 ft. L. E. Doyle's Sherman 1, 24-20n-4e, rig. Petroleum Exploration Co.'s State 1, 32-20n-5e, sd 1000 ft. J. E. Flannigan's Whipple 1, 18-20n-5e, loc.

CLARE COUNTY—Sun Oil Co.'s Campbell 1, 12-19n-3w, dr 3300 ft. Wittmer Oil Co.'s Musgrove Sales 1, 15-18n-5w, ur 1200 ft.

CLINTON COUNTY — Petroleum Exploration Co.'s Schneeberger 1, 11-5n-2w, dr 2740 ft. Prima Oil Co.'s Fitzpatrick 1, 10-8n-4w, dr 1000 ft.

GLADWIN COUNTY—A. N. Henry's Little 1, 36-17n-2w, sd 3778 ft. F. V. Wicklund's State 1, 11-18n-1w, Dundee 3534 ft, so&g 3596 ft, csg 5-in. McClanahan Oil Co.'s Every Est. 1, 10-17n-1e, rig.

GRATIOT COUNTY — Gulf Refining Co.'s Moorman 1, 7-11n-2w, sd 2000 ft. C. E. Weller's Bolyard 1, 27-9n-3w, dr 410 ft. Herbert Snell's Smead 1, 20-11n-4w, sd 3198 ft.

HURON COUNTY—C. W. Teater's Inda 1, 32-18n-13e, dr 1340 ft; Keller 1, 27-16n-11e, dr 1550 ft.

MISCELLANEOUS — Isabella County: H. E. Bell's Delo 1, se sw sw, 17-13n-5w, rig. Missaukee County: Rex Oil Co.'s Meekoff 1, 30-21n-6w, dr 600 ft. M. J. Ingold's Donley 1, 31-22n-8w, sd 3360 ft. Montcalm County: R. E. Gallagher's Hayden 1, 25-11n-7w, dr 1500 ft. Osceola County: M. B. Keeler's Beal 1, 24-18n-9w, dr 2700 ft. Mecosta County: Taggart Brother's Lintenmuth 1, 35-15n-9w, dr 1600 ft.

MONTANA

CARBON COUNTY—East Bridger Oil & Gas Co.'s 1, csl se se 23-6s-23e, dr 1555 ft. Bailey-Round Butte Oil Co.'s 2, sw ne se 3-6s-23e, dr 1173 ft.

FERGUS COUNTY—Emmons et al's Government 3, se ne ne 6-21n-18e, dr 1096 ft; Government 4, sw sw sw 3-21n-18e, dr 451 ft. Judith Operating Co.'s Government 2, cwl nw ne 35-22n-17e, dr 3200 ft.

PARK COUNTY—Ben Ryan's Burgess 1, se sw nw 28-28n-11e, dr 539 ft.

PETROLEUM COUNTY—H. Clark Rowland et al's Kalispell 1, ne ne se 31-14n-25e, dr 638 ft.

PHILLIPS COUNTY — R. G. Parrent's Hartmen 1, cnw se 12-24n-25e, dr 670 ft.

PONDERA COUNTY—Gordon Campbell's Hughes 1, ne ne nw 12-30n-4w, fsg tools at 2497 ft. Klinch Petroleum Co.'s Hollam 1, nw nw nw 21-28n-6w, dr 2200 ft.

COLORADO

BOULDER COUNTY—W. F. Baker et al, Lee 2, nw ne nw 21-1n-70w, dr 2250 ft.

KIOWA COUNTY—Gulf Oil Corporation, Risser-Union Pacific 1, csw ne 1-17s-50w, sd for cement to set around 10¾ in csg landed at 3925 ft.

LA PLATA COUNTY—Detroit Oil & Gas Co. 1, sw sw 8-35n-12w, recovered tools lost at 3397 ft, sd for dr line.

PUEBLO COUNTY—Phillips Petroleum Co., Andover-Century 1, ne sw nw 26-18s-65w, sd 1760 ft.

PARK COUNTY—South Park Oil Co., State 1, se se sw 16-11s-75w, dr 5600 ft. South Park Oil Co., Lemarr 1, ne ne se 34-11s-75w, dr 3330 ft.

WYOMING

ALBANY COUNTY—Hal Blakeman's Chappel 1, cne nw 3-21n-76w, dr 1715 ft.

CONVERSE COUNTY—Wyoming-Southern Oil Co.'s Salisbury 2, nec nw se 27-32n-69w, dr 210 ft.

PARK COUNTY—General Petroleum Corporation's Government 1, nw nw nw 33-47n-100w, dr 5139 ft.

PLATTE COUNTY—Dividend Oil & Refining Co.'s Government 1, csl nw sw 17-24n-66w, dr 1940 ft.

LARAMIE COUNTY—Amerada Petroleum Corporation's Morton 1, 13-13n-68w, dr 8025 ft.

UTAH

EMERY COUNTY—California Co.'s Unit A-1, cnw nw 27-23s-11e, dr 200 ft.

GRAND COUNTY—Columbia Crude Corporation's Rath-Government 1, ne sw ne 12-25s-20e, dr 1920 ft and preparing to run 7-in csg for water so. Utah Southern Oil Co.'s Hyde-Government 1, s nw nw 32-22s-2e, is dr 5916 ft. Cane Creek Oil Co.'s Government 1, nw ne 6-27s-21e, is spd.

NEBRASKA

FRANKLIN COUNTY — William Stienle's 1, se ne se 32-22s-2e, dr 425 ft.

SIOUX COUNTY—J. M. Huber Corporation's Morgan 1, cnw sw 32-35n-56w, dr 2500 ft.

NEW MEXICO

LEA COUNTY — Anderson-Prichard Prod. Corp.'s C. M. Carlson 2, c sw nw 21-25s-37e, elev 3072 ft, dr 2530 ft. Argo Royalty Co.'s Lanehart 1, sw se ne 21-25s-37e, elev 3071 ft, pb fr 3782 ft to 3572 ft, shot 180 qts nitro 3025-75 ft, completed as 5,500,000 ft gas. Baldridge et al's Blakey 1, c nw ne 5-20s-38e, elev 3586 ft, base salt 2660 ft, sd for cable tools, td 2815 ft. Brown & Reynolds' Parcell 1, c nw se 8-21s-38e, elev 3573 ft, base salt 2820 ft, making gas, fsh tools 3160 ft. Carlock et al's Quincy-Ricker 1, c se se 7-16s-36e, elev 3945 ft, top anhydrite 1975 ft, sd repairs, td 4142 ft. Amon G. Carter et al's E. M. Elliott 1, c nw nw 22-22s-37e, elev 3374 ft, run 7-in csg 3400 ft; Elliott 2, c ne nw 22-22s-37e, elev 3375 ft, dr 2130 ft. C. & G. Oil Co.-The Texas Co.'s Ellen

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• The amazing flexibility of the Chiksan All Steel Rotary Hose is due to its seven joints and 17 movements which allow perfect 360 degree "swing". Two rows of ball bearings on each swivel add greatly to the strength and performance of this hose. A patented packing unit provides — positive seal — minimum amount of friction and eliminates leakage problems.

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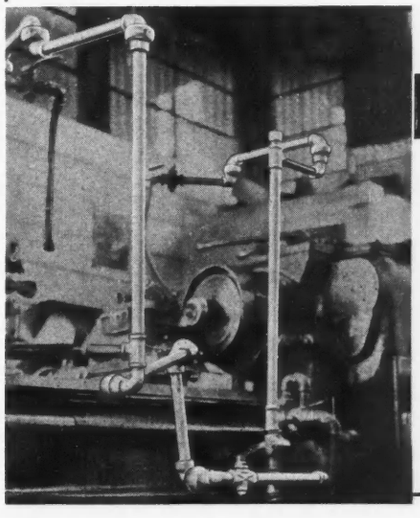

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☐ CHIKSAN DRILLING TOOLS (Bits, Reamers, Rotary Hose)

Name_____

Address_____

Company_____

Position_____

Weir 1, c ne ne 14-20s-37e, elev 3564 ft, td 4074 ft, testing. J. C. Clower et al's W. H. Turner 1, c se se 29-21s-37e, elev 3469 ft, dr 3500 ft. Barney Cockburn & Rowan-Nichols Oil Co.'s H. G. Mattern 1, c sw se 7-22s-37e, elev 3426 ft, td 3789 ft, tested mostly water, sdo. Continental Oil Co.'s Mary E. Wantz 1, c sw sw 21-21s-37e, dr anhydrite 1220 ft. Conoco & The California Co.'s Ira C. Forney 1-A-5, c sw se 5-23s-36e, elev 3457 ft, top anhydrite 1435 ft, base salt 3260 ft, top Yates sand 3420 ft, lime pay 3750-3760 ft, flowed 38 bbls 32 gravity oil per hr via ¾-in tubing choke nat'l and 660,000 ft gas daily, completed; Rex Williams 1-A-27, c sw sw 27-23s-35e, elev 3428 ft, top anhydrite lime 1580 ft, tested salt water 4083-4130 ft, dry and abd. Culbertson, Erwin & Stovall's J. R. Stuart-Repollo 2, nw se se 10-25s-37e, elev 3108 ft, fsh 3277 ft; Stuart-Repollo 3, ne se sw 10-25s-37e, elev 3111 ft, machine. Devonian Oil Co.'s A. L. Christmas 1, ne ne se 28-22s-37e, elev 3339 ft, cem 7-in cas 3405 ft. Empire O&R Co.'s R. L. Brunson 1, nw nw se 4-22s-37e, elev 3446 ft, top anhydrite 1140 ft, dr 2880 ft; Anna Walden 1, c se nw 21-22s-37e, elev 3352 ft, shot 300 qts nitro 3475-3600 ft, flowed 30 bbls oil per hr. A. R. Eppenauer et al's F. B. Stuart-Amerada 1, ne ne ne 22-25s-37e, elev 3082 ft, top anhydrite 1000 ft, top salt 1200 ft, fsh 2710 ft. J. E. Farrell & Co.'s E. W. Walden-Amerada 1-A, c sw nw 15-22s-37e, elev 3407 ft, sd 3400 ft; Walden-Amerada 1-C, c sw sw 15-22s-37e, elev 3385 ft, est 20,000,000 ft gas, fsh tools, td 3502 ft. Geo. F. Getty Oil Co.'s D. C. Hardy 2, c sw se 20-21s-37e, elev 3497 ft, dr 3740 ft; Etz-Conoco 1, c ne ne 12-21s-32e, elev 3822 ft, fsh 1015 ft. Harry W. Leonard et al's B. T. Lanehart 3, c ne nw 21-25s-37e, elev 3081 ft, lcn. Magnolia's E. O. Carson 3, c sw sw 28-21s-37e, elev 3467 ft, show gas 3656-58 ft, dr 3715 ft; State 1-G, nw nw ne 24-17s-34e, elev 4019 ft, top anhydrite 1700 ft, dr anhydrite and lime 3795 ft. Maljamar O&G Corp.'s Baish 7, c se nw 21-17s-32e, elev 4046 ft, shot 10 qts nitro 2350-2362 ft, complete, flowing 80 bbls daily; Baish 8, c sw ne 21-17s-32e, mim. Joe C. Maxwell, R. Crandall & C. H. Osmond's State-Lane 1, c sw nw 32-10s-34e, elev 4205 ft, top anhydrite 2060 ft, base salt 2750 ft, dr 4050 ft. Plains Prod. Co. et al's Knight-Humble 3, c se se 21-24s-37e, elev 3218 ft, fsh 3430 ft; Knight-Humble 4, c sw sw 22-24s-37e, elev 3225 ft, mim. Repollo Oil Co.'s O. J. Boyd 2, nw nw nw 23-22s-37e, elev 3338 ft, shot 150 qts 3595-3645 ft, td 3700 ft, swab 31 bbls oil 12 hrs, testing; Robt. Jamison 2, sw sw nw 22-24s-37e, elev 3236 ft, dr 400 ft; A. M. York 1, se se ne 20-21s-37e, elev 3495 ft, shot 300 qts nitro 3700-3850 ft, flowed 66 bbls 24 hrs, co at 3785 ft. Rushwold Oil Co.-Conoco & California Co.'s E. E. Carter 1, c nw ne 30-20s-39e, elev 3559 ft, top anhydrite 1616 ft, base salt 2805 ft, dr anhydrite 3588 ft. Samedan Oil Corp.'s S. B. Hughes 2, c nw se 4-23s-37e, elev 3318 ft, dr 3165 ft. Shell Pet. Corp.'s State 1-T, c se ne 34-20s-35e, elev 3719 ft, dr 3460 ft. Skelly Oil Co.'s J. V. Baker 3, c ne nw 27-22s-37e, elev 3341 ft, dr 3230 ft; Hugh C. Sims 1-D, c se nw 3-23s-37e, elev 3300 ft, td 3523 ft, est 14,000,000 ft gas with 2½ bbls oil per hr, testing; R. R. Sims 2, c ne sw 3-23s-37e, elev 3298 ft, sd 1196 ft; R. R. Sims 1-C, c se sw 3-23s-37e, elev 3297 ft, dr by tools 3347 ft; W. P. Sims 1-B, c nw ne 10-23s-37e, elev 3296 ft, dr 3500 ft. Stanolind O&G Co.'s C. Myers 1, c ne sw 22-24s-37e, mim. W. H. Street et al's Wood-Humble 1, near c se ne 22-22s-37e, elev 3355 ft, dr 1450 ft. Sun Oil Co.'s I. R. Stuart 2, c sw ne 15-25s-37e, lcn. The Texas Co.'s Jas. F. Black 1, c sw ne 21-24s-37e, elev 3225 ft, td 3495 ft, running tubing to test; J. P. Alexander 1, c lot 14, 5-21s-37e, mim; V. M. Henderson 1, se se ne 30-21s-37e, elev 3490 ft, td 3820 ft, running tubing. Tide Water Associated Oil Co.'s Coates 1-B, c nw nw 21-25s-37e, elev 3073 ft, pb from 3077 ft to 3054 ft, est 5,000,000 ft gas, sd for shot.

ROOSEVELT COUNTY—Clovis Dev. Co.'s S. Smith 1, c se ne 17-2s-30e, elev 4597 ft, dr 1170 ft. Franklin Oil Corp. et al's Rual Giphant 1, nw nw nw 28-3n-30e, elev 4458 ft, dr 3835 ft. Joe C. Maxwell, R. Crandall & C. H. Osmond's A. B. Williamson 1, c nw nw 7-8s-36e, elev 4149 ft, dr 3890 ft.

OKLAHOMA

ATOKA COUNTY—A. J. Sanders' Redden ,3 se sw sw 19-1n-15e, testing 932½ ft.

BECKHAM COUNTY — Mid-American Oil Co.'s Biscoe 1, sw se ne 28-2n-22w, sd 1100 ft.

CARTER COUNTY—Head & Straus' Simpson-Fell 1, nw nw se 8-5s-1e, reaming 760 ft, td 1464 ft.

CLEVELAND COUNTY — Helmerich & Payne's Glenn 1, cnw ne 6-8n-1w, dr 5968 ft.

COAL COUNTY—Continental's Kirby 1, sw se sw 23-1n-8e, dr 2135 ft. Continental's Breedlove 1, nw sw sw 24-1n-8e, dr 5519 ft. Continental's King 1, ne sw ne 26-1n-8e, F 8 to 10 bbls oil 24 hrs, co. Continental's Daniels 1, sw ne sw 27-1n-9e, cor. Carter's Warne 1, ne ne nw 31-2n-9e, sso 5556-60 ft. Shell's Hill 4-A, cnw 30-3n-10e, td 5802 ft, D&A.

COMANCHE COUNTY — Frank Scott's Kuntz 1-A, cse ne se 21-4n-11w, dr 1830 ft. C. V. Morris' Young 1, se ne se 24-3n-10w, dr 660 ft.

COTTON COUNTY — Phillips Pet. Co.'s Warren 1, ne ne se 1-5s-13w, fsg 3333 ft. Grace-Wood Drlg. Co.'s Wilson 1, csw nw 17-4s-11w, sdo 4218 ft.

CREEK COUNTY—W. J. Sherry's Childers 1, sw sw nw 2-15n-7e, lcn.

GARFIELD COUNTY — Ohio's McFarland 1, se se se 25-24n-3w, td 5242 ft. Arab Oil Co.'s Harkendorf 1, ne ne ne 34-20n-3w, dig pits.

GARVIN COUNTY—Ellison & Hammond's Selby 1, cnw nw 24-2n-3w, dr 5925 ft. Hayes Drlg. Co.'s Howell 1, cse nw 34-1n-1e, rig.

GRADY COUNTY—R. E. Johnson et al's Thomas 1, se sw se 18-5n-7w, mir.

GREER COUNTY—Bud Lewis et al's Webster 1, sw ne ne 7-7n-24w, fsg 1745 ft.

HUGHES COUNTY—T. P. McAdams & Barnes' Koch 1, sw ne ne 1-9n-10e, sd. R. K. Ellison's Peters 1, se nw se 8-6n-10e, dr 3956 ft. Mid West Oil Co.'s Turner-Lucas 1, cse nw 13-9n-9e, sd 1564 ft. Carson Oil Co.'s Lyter 1, ne nw sw 31-8n-12e, lcn.

JACKSON COUNTY—Everett & Morgan's Dameron 1, cnw sw sw 34-3n-18w, sdo 301 ft.

JEFFERSON COUNTY—Massad & Swansberger's Barrett 1, ne se se 14-6s-6w, sd 200 ft. Lake-O-Moore, Derr 1, nw nw se 13-5s-8w, mir tools.

KAY COUNTY—G. A. Brown et al's Harris 1-A, sw sw ne 14-25n-1e, br. Helmerich & Payne's Constant 1, sw sw ne 17-28n-2w, dr 3235 ft. Black Gold Oil Co.'s Cooley 2, sw sw se 25-28n-4e, lcn.

KIOWA COUNTY—Nagel & Adam's Oster 1, sw ne sw 27-7n-17w, fsg 930 ft.

LeFLORE COUNTY—McGraw et al's Tidwell 1, cnw se 17-3n-22e, sd.

LINCOLN COUNTY — Mid-Continent Pet. Corp.'s Logan 1, ne ne se 31-11n-5e, woc.

LOGAN COUNTY—Anthony & Marshall's Fruin-Eckman 1, se se sw 4-16n-1e, co 4955 ft. Helmerich & Payne's Hasler 1, nw nw se 14-16n-4w, dr 6140 ft. Harry Blackstock's Prince 1, se ne sw 11-17n-3w, dig cel.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, sd. Magnolia Pet. Co.'s Gardner 1, cne ne nw 34-6s-2e, dr 2595 ft.

MARSHALL COUNTY—Stewart & Taylor's Chestnut 1, ne ne ne 23-8s-5e, dr 750 ft.

MURRAY COUNTY—Power Oil Co.'s Lancaster Trust Co. 1, csw ne 10-1s-2e, most 3203 ft. Russell's Fee 1, se nw se 9-2s-3e, dr 500 ft.

NOBLE COUNTY—Shell et al's Moelling 1, csw nw 31-21n-2w. S. I. Darby et al's Aetna Life Ins. Co. 1, se se nw 1-23n-2w, dr 3210 ft.

OKFUSKEE COUNTY—Okla Oil Corp.'s Dawley 1, nw nw se 8-10n-9e, sd.

OSAGE COUNTY—Norbla Oil Co.'s No. 1, ne ne se 13-23n-6e, ru mach.

PAYNE COUNTY—H. F. Young's Jenkins 1, se ne se 4-17n-3e, dig cel.

PITTSBURG COUNTY—Okla Dist. Co.'s Beeler 1, ne ne sw 7-7n-14e, fsg 4525 ft.

PONTOTOC COUNTY—Ramsey Pet. Co.'s Johnson 1, sw sw se 9-3n-7e, cor. Delaney & Boettcher O&G Co.'s Alexander 2, sw ne sw 24-4n-7e, dr 3963 ft. E. H. Moore et al's Muse 1, sw ne se 33-2n-7e, C&P.

SEMINOLE COUNTY — R. M. Purcell's Gilliland 1, se se sw 24-11n-7e, lcn. H. E. Kennedy's Bowlegs 1, nw nw se 3-8n-7e, dr 2580 ft. Carter et al's Simpson C-48, sw sw ne 7-8n-8e, bldg rig.

STEPHENS COUNTY—Ed Parson's Olson 1, csw sw 21-2n-8w, testing. Coline Oil Co.'s Johnson 1, csw se nw 1-2n-8w, dr 5800 ft. Edward's Frederick 1, ne se nw 31-2n-8w, sd 2508 ft. Jack Cohen's Pierce 1, cne nw 24-2s-6w, sd 268 ft.

TEXAS COUNTY — Allison & Barnhill's Bingley 1, sw sw ne, 30-2n-18ecm, sd.

TILLMAN COUNTY—I. T. I. O. Co.'s Drumm 1, csw nw 32-2s-17w, dd. Shirley Clum et al's Moriele 1, nw nw se 16-4s-14w, dr 2330 ft.

EAST TEXAS

ANDERSON COUNTY — Tom F. Hunter, American Liberty Oil Co. et al's G. E. Gage 1 (160-ac), C. Bird Gilbert sur, Blackfoot structure, 8500-ft Trinity test, cem surface pipe. Tide Water Associated-Seaboard Oil Corp.'s Monnig Bros 7 (3806.82-ac), Simon Sanchez sur No. 1-11, Long Lake field Trinity test, elev 233 ft, sp. Comer E. Todd et al's W. T. Todd 1 (100-ac), A. B. Patton sur, Boggy Creek area, sd 2450 ft.

BOWIE COUNTY—Ferguson & Hill's A. Y. Breckenridge 1 (412-ac), Nancy Dycus sur, 4 mi w Texarkana, top Nacatoch sand 740 ft, sd 1150 ft. Woodley & Bentley's J. D. Lumpkin 1 (245-ac), John McDermott sur, 1¼ mi sw Dalby Springs, elev 290 ft, Annona chalk 1665-2090 ft, sd 4404 ft.

COLLIN COUNTY—E. A. Parkford et al's Mrs. W. L. Fagg 1 (38-ac), Jas. Rutherford sur No. 4, 2 mi ne Blue Ridge, elev 626 ft, Georgetown lime 1980-2651 ft, tested fresh water with scum oil in Paluxy series at 2661-2771 ft, dr 3200 ft. Port Bolivar Co.'s O. C. Durning-Clarkston 1-A (140-ac), Wm. Creager sur, Pat. No. 1193, 2½ mi n Anna, elev 722 ft, sd 4098 ft; A. Shirley 1 (50-ac), Gwynn Morrison sur, ½ mi e Anna, sp and sd.

DALLAS COUNTY—Mauldin Oil Co.'s W. E. Howell 1 (107.7-ac), S. Layton sur, 8 mi e Grapevine, rur.

DELTA COUNTY—F. J. Estes et al's W. S. McGee 1 (207-ac), J. G. Oliver sur, 2 mi sw Klondike, dk. W. S. McGee et al's Mrs. P. W. Miller 1 (52-ac), E. Spencer sur, 1 mi sw Cooper, elev 465 ft, top Woodbine Red Beds 2650 ft, top Georgetown 3040 ft, sd 4220 ft.

FALLS COUNTY—J. Edward Mills et al's Sam Grucholski 1 (40-ac), Dennis Herold League, 5 mi sw Kosse, elev 521 ft, top Edwards lime 3867 ft, top upper Glen Rose 4074 ft, co 4114 ft, will deepen to lower Trinity.

FREESTONE COUNTY—C. A. Everts et al's O. W. Killam 1 (840-ac), John Robbins sur, 6½ mi se Fairfield, Red Lake area, elev 368 ft, dr 3500 ft. Fred R. Lovering et al's E. Bonner-Scott 1 (23-ac), H. Awalt sur, 7 mi n Fairfield, Pecan chalk 2175-2286 ft, top Austin chalk 3117 ft, sd 3870 ft. R. L. Wheelock, J. L. Collins et al's W. R. (Bill) Boyd, Jr. 1 (410½-ac), F. P. Cabler sur, 3½ mi sw Fairfield, elev 425 ft, Pecan chalk 2744-2813 ft, broken to 2835 ft, Austin chalk 3630-4002 ft, dr shale 4180 ft.

GRAYSON COUNTY—Olson Drl. Co., Jas. H. Gardner, Broswood Oil Co. et al's D. R. Utiger 1 (160-ac), P. P. Cady sur, 5 mi nw Denison, elev 722 ft, show o&g in Trinity 860-890 ft, base Trinity series 930 ft, top Woodford chert 955 ft, top Viola cherty-lime 1570 ft, top Stringtown shale 1854 ft, dr 2440 ft.

HOPKINS COUNTY—Empire O&R Co.'s J. E. Worsham 2 (149.36-ac) A. O. Wetmore sur, Sulphur Bluff area, dr 3600 ft. Walter L. Goldston & Frankel Bros.' H. J. Smith 3 (450-ac), Jas. A. Craft sur, mim. D. S. Hager and W. P. Luse's J. G. Reynolds 1 (200-ac), A O. Wetmore sur, elev 420 ft, top Woodbine series 3700 ft, top Red Beds 3750 ft, top lime 3850 ft, cut through fault 3860 ft, top Paluxy series 4426 ft, pay 4473-4508 ft, flowed 45 bbls 23.8 gravity oil per hr initial via 2½-in tubing; Reynolds 2, dr 2000 ft. D. S. Hager, Luse and Russ Pet. Co.'s J. E. Worsham 6 (192.26-ac), A. O. Wetmore sur, elev 442 ft, Pecan chalk 1523-1600 ft, Paluxy pay 4493-4535 ft, completed flowing 60 bbls oil per hr through open tubing; Jeff M. Worsham 2 (39.82-ac) A. O. Wetmore sur, elev 444 ft, Pecan chalk 1530-1654 ft, top Woodbine series 3450 ft, top Georgetown lime 3632 ft, Paluxy pay 4498-4537 ft, completed flowing 35 bbls oil per hr open tubing; Worsham 2, mim. F. D. Jones Drlg. Co. et al's Mrs. J. K. Pierce-Gulf 7 (225-ac), Jas. A. Craft sur, elev 447 ft, Paluxy pay 4474-4526 ft, testing. Shell Pet. Corp.'s J. G. Reynolds 1 (20-ac), A. O. Wetmore sur, lcn.

HOUSTON COUNTY—E. R. Mount, Branch et al's Dr. P. S. Griffiths 1 (136-ac), Frank Johnson sur, 3 mi sw Crockett, sd 700 ft.

HUNT COUNTY—Penn Oil Corp.-Elmer S. & Fox Wood's A. B. Manning 1 (57½-ac), Sally Owens sur, 5 mi ne Lone Oak, elev 599 ft, dk. Stanolind O&G Co., M. J. Delaney et al's L. B. Moore 1 (92-ac), R. Ragsdale sur, 2½ mi w Campbell, lcn. Superior Oil Co. (Cal.), Moncrief & Showers, Inc., Ed Hyde & W. L. Pickens' P. B. Paul 1 (160-ac), Mary Latham sur, 5 mi ne Quinlan, Trinity test, elev 489 ft, cem surface cas. Texola Land Corp.'s J. M. Goin 1 (250-ac), J. Merrick sur, mim.

LAMAR COUNTY—H. Salmon, Lowery & Cutler's E. C. Porter 1 (30-ac), Thos. King sur, 3 mi ne Chicota, Woodbine series 168-242 ft, top Georgetown lime 354 ft, sd 1050 ft.

LEON COUNTY—H. M. Ogg et al's O. Wiley 1, Devinney sur, 1 mi w Buffalo, dr. Roth & Faurot O&G Co.'s J. L. Shaw 1 (254-ac), O. R. Reams sur, 5 mi n Centerville, top broken Pecan chalk 4065, base chalk 4290 ft, top Gober chalk 4860 ft, Austin chalk 5150-5390 ft, sd 6132 ft.

LIMESTONE COUNTY—A. W. Phillips, J. Johnson et al's E. M. Speight (136½-ac) M. Herrin and Pedro Varella sur, 4 mi ne Groesbeck, top Austin chalk 2720 ft, reported show of oil, coring 3160 ft.

RAINS COUNTY—Humble O&R Co.'s O. L. J. Easter 1 (39¾-ac), R. Hotchkiss sur, 4½ mi e Emory, elev 438 ft, Pecan chalk 2185-2435 ft, Austin chalk 3424-3745 ft, top Woodbine 4225 ft, top sand 4380 ft, top Washita 4970 ft, top Georgetown 5003 ft, top Paluxy series 6079 ft, tested water, top upper Glen Rose lime 6347 ft, top anhydrite 6985 ft, dr 7210 ft.

RED RIVER COUNTY—J. S. Abercrombie Co.-Harrison Oil Co.'s Southern Pine Lumber Co. 3 (392.37-ac), D. D. Bruton sur, 11 mi ne Clarksville, elev 403 ft, td 2311 ft, probably junked. Carpenter Oil Corp.'s R. E. Anderson 1 (100-ac), S. W. Sims sur, 3 mi n Clarksville, elev 459 ft, top Red Beds 1250 ft, sd 1835 ft. Roy I. Carter Drlg. Co. et al's J. A. Tutt 1

(40-ac), Dennis Harty sur, 2 mi s Avery, elev 440 ft, sp and sd. M. Petroff et al's R. C. Morris 1 (176-ac), Joseph Guest sur, 2 mi w Detroit, sp and sd. Dale Sneed, R. H. Manning & Texfornia Co.'s Hooker-Hughes 1 (80-ac), MEP&P Ry. sur, No. 642, 6 mi sw Lydia, elev 307 ft, Pecan chalk 995-1302 ft, top Austin chalk 2018 ft, sd 2720 ft.

ROBERTSON COUNTY—J. Edward Mills et al's Tony Congelosi 1 (75-ac), Geo. A. Nixon sur, 3 mi sw Hearne, jkd & abd 2250 ft, skid rig.

RUSK COUNTY — Ben E. Lamb et al's Haywood-Leath 1 (185-ac), L. J. Dooley sur, 2½ mi e Pirtle, elev 370 ft, Pecan chalk 2468-2793 ft, Austin chalk 3352-3512 ft, sd 4740 ft.

TITUS COUNTY—J. V. McMahon, Geo. H. McIntyre et al's John B. Stevens Jr. 1 (777½-ac), J. Muechen sur, 7 mi sw Mount Pleasant, elev 349 ft, Pecan chalk 2290-2600 ft, sd 4200 ft.

WOOD COUNTY—G. W. Nix et al's Mrs. E. A. Russell 1, John Delap sur, 4 mi w of Golden, sd 600 ft.

SOUTH TEXAS

ARANSAS COUNTY—Atlantic's McCampbell Ranch 2-C, C lease, lot 9, sec 40, McCampbell Ranch sub, McCampbell area, lcn. Barnsdall Oil Co.'s Kate Edwards 1, 80 ft wl, 330 ft sl out lot 87, Lamar Townsite, Wm. Lewis sur 96, 9 mi ne Rockport, dr 5225 ft.

ATASCOSA COUNTY—Frontier Oil Co.'s D. & A. Oppenheimer 1, 193.4-ac tr, J. Sharp sur No. 518, 6 mi s Lytle, still sd 200 ft. Helvetia Oil Co.'s Susie Pratt 2, 176-ac tr, F. de la Garza sur, Anchorage prospect, ½ mi se Pratt 1, top serpentine 3085 ft, soft broken serpentine 3224-66 ft, top Austin chalk 3428 ft, pb 3250 ft, perf liner 3150-3208 ft, apparently poor shot, cleaning out, may shoot again. L. G. Priest, Tr.'s John Sanders 1, 117.61-ac tr, J. P. Garman sur No. 1189, still sd 1160 ft.

BANDERA COUNTY—A. T. Crane et al's R. B. Watson 1, A. C. Curver sur No. 71, 2 mi n Medina City, td 2035 ft, black shale, co to dd.

BASTROP COUNTY—Illinois Pet. Corp.'s W. H. Hill 1, 120 ft nel and 1000 ft sel (Highway) of tr in J. A. Navarro sur, 6 mi n Cedar Creek, ru. Joe E. Mills' Chas. W. Eskew 1, 600 ft nwl, 1525 ft swl, Chas. W. Eskew 298.5 ac tr, Samuel Wolfenberger sur No. 18, td 2904 ft, set 5 in cas at 2458 ft, pb to 2458 ft and testing.

BEE COUNTY—Benson & Jones' Geo. A. Ray 1, 40-ac tr, Anna Burk sur, 3 mi e Beeville, old well, sd 4910 ft in sdtr hole.

BEXAR COUNTY—Algra Oil Co.'s Edward C. Peters 1, Miguel Gotari sur 5, sec 4, 13 mi se San Antonio, still sd 670 ft. American Gas Co.'s Oliver 5, 400-ac tr, M. F. Roderiguez sur, Gas Ridge, dr 3410 ft. Albert Chmel's Theresa McIntosh 1, 274-ac tr, J. W. Garrity sur No. 19, ¾ mi sw Kirby, sd 485 ft. J. H. Devine et al's Victor Galla 1, 150 ft sl, 150 ft wl of 100 ac tr, Jose Bustillo sur No. 29, 1½ mi e Hange and Donnell, Mahula, lcn. Eckert & Son and W. W. Kelley's W. Barkmeyer 1, 586-ac tr, Villepando sur, near Hildebrand rd, 12 mi e and s of San Antonio, dr 1000 ft. J. O. Williams' C. Hoch Est. 1, 157-ac tr, J. M. Baerrera sur No. 58, 1¼ mi n Von Ormy pool, td 483 ft, temp abnd, may move on rotary rig. Woodward, Hardie & Herrold's Herman Sons 1, 2019-ac tr, Henry Pace League, sur 37, tr 9, Swearingen, Cassin & Tayloe subd, 28 mi s San Antonio, dr 1640 ft.

BROOKS COUNTY—California Co.'s Mestena O&G Co. 1, Alta Mesa area, B. Garcia tr 5, La Mestena de Gonzalina gr, dr 3300 ft; B. Garcia 3-2, tr No. 3, La Mestena de Gonzalina gr, Alta Mesa area, sand 2451-58 ft, 7 in cas 2451 ft, trying to complete. Douglas & Burden, Inc.'s M. A. Faller 1, G. M. Laughlin sur No. 434, Alta Verde, 1½ mi se prod, stdg 900 ft.

BURLESON COUNTY—M. R. Exploration Co., Inc.'s J. M. Fountain 3, 936-ac tr, blk A-7 of W. Raleigh sur, 700 ft e No. 2, 12 mi ne Caldwell, lcn. Red Bank Oil Co.'s Nellie Gramm 1, Elisa Santef sur, abt 2500 ft nw Co.'s Gramm 1, 7 mi w Creisman, td 6241 ft, top Edwards 6226 ft, 5 in cas 6223 ft, flowed considerable fluid, half oil, half salt and sul water, killed and preparing to pb to 6234 ft in effort to cut off water.

CALDWELL COUNTY — Brown Drilling Co.'s W. J. Pope 2, Salt Flats area, 134-ac tr, John D. Rains sur, 8 mi se Lockhart, 500 ft e Pope 1, lcn; G. M. Blackwell 1, 409-ac tr, John Roe sur, 1500 ft w Grayburg's Blackwell 1, 7 mi sw Lockhart, td 2191 ft, set 6 inch cas 1911 ft, drlg plugs. McKenzie's J. M. Pierce 1, S. Seal league, s of Luling, Dulap area, re-dr 125 ft. R. George Young, Trustee's Lena Schmidt 1, W. C. Williams 1/3 league, 3 mi w Lockhart, sd 70 ft.

DE WITT COUNTY—D. G. Glaspie et al's M. A. Olson 1, 550 ft nl, 150 ft el 50-ac tr, A. Dillard sur, td 651 ft, abnd.

DUVAL COUNTY—Argo Oil Co. and Clopton's Smith-Corkill Est. 1, center e ¼ sur 61 (N. Munez sur) 447-ac lse, 2 mi s Hoffman eld, td 2846 ft, 3 dst failed, reaming to make test 2839-46 ft. A. J. Brinkoiters State 3, 350 ft nl, 1533 ft wl of sur 215, ½ mi s of field, sp. N. V. Duncan's Worden and Drought 2, 700 ft n and 45 degrees w of 1, sur 151, Charamousca area, abnd 1700 ft. Filcrease Oil Co. and Tom Graham's M. S. Escobar 1, blk 4, sec 2, 829.5-ac tr, Juan Jose Manuel de la Garza Falcon gr, Buffalo, Tex., subd, 2 mi sw Premont area, coring 2800 ft. Hiawatha Oil & Gas Co.'s Southland Life Insurance Co. 1, sec 15, Agua Poquita gr, 6 mi s Benavides, lcn. Magnolia Pet. Co., C. W. Hahl 1, 330 ft sl, 150 ft wl, Hahl tr, sur 41, 1 mi n Loma Novia sand prod in Gov't Wells field, td 181 ft, set 10¾ in cas. A. L. Labbe 2, 990 ft sl and wl of sec 1, H&GN RR sur, 2360-ac lse, 1 mi n Labbe field, lcn. E. & E. Labbe 1, sec 221, 2/3 mi nw Labbe field, Loma Novia complete, 15 mcf gas per day, tp 550 lbs, cp 850 lbs, td 2850 ft. Oliver Oil Co.'s K. Shaffer 1, s¼ sur 146, drlg water well. Albert Plummer et al's Herman Danmier 1, ne ¼ sec 58, Copeta Garden tracts, addn No. 4, 9 mi s Realitos, td 3175 ft, changing rigs. Porter & Blanchard's J. T. (Amos) Dinn 1, 330 ft nl and el sec 462, 6 mi n Cole field, dr 1600 ft. Smith & Hamill's J. Benavides 3, sub 2, El Mesquite gr, 6 mi se Bruni, dr 2680 ft. J. Elmer Thomas et al's J. B. Peal 1, sur 794, 1 mi e Lopez field, td 2244 ft, top sand 2243 ft, no show, dr to contract depth. E. R. Thomas' Lillian Parr (was A. Parr et ux) 2, ne¼ sur 2, td 4950 ft sand.

EDWARDS COUNTY—Plateau O&G Co.'s Mrs. R. L. Hatch 1, J. W. May sur, sec 66, HE&WT Ry. sur, td 4750 ft, sd at contract depth.

FAYETTE COUNTY—McNeil Pet. Co.'s V. Dybala 1, 1056 ft nwl, 150 ft nel, 79-ac tr, A. Thompson league, 2 mi se Fayetteville, ru.

FRIO COUNTY—Amerada's Halff & Oppenheimer 7, E. J. Gilman sur, Pearsall, td 5573 ft, set 5 in cas 5237 ft, shot hole full of oil with 450 qts, co. Halff & Oppenheimer 8, San Antonio Ditch Company sur No. 1104, Pearsall, td 6120 ft, set 95/8 in cas, wocs.

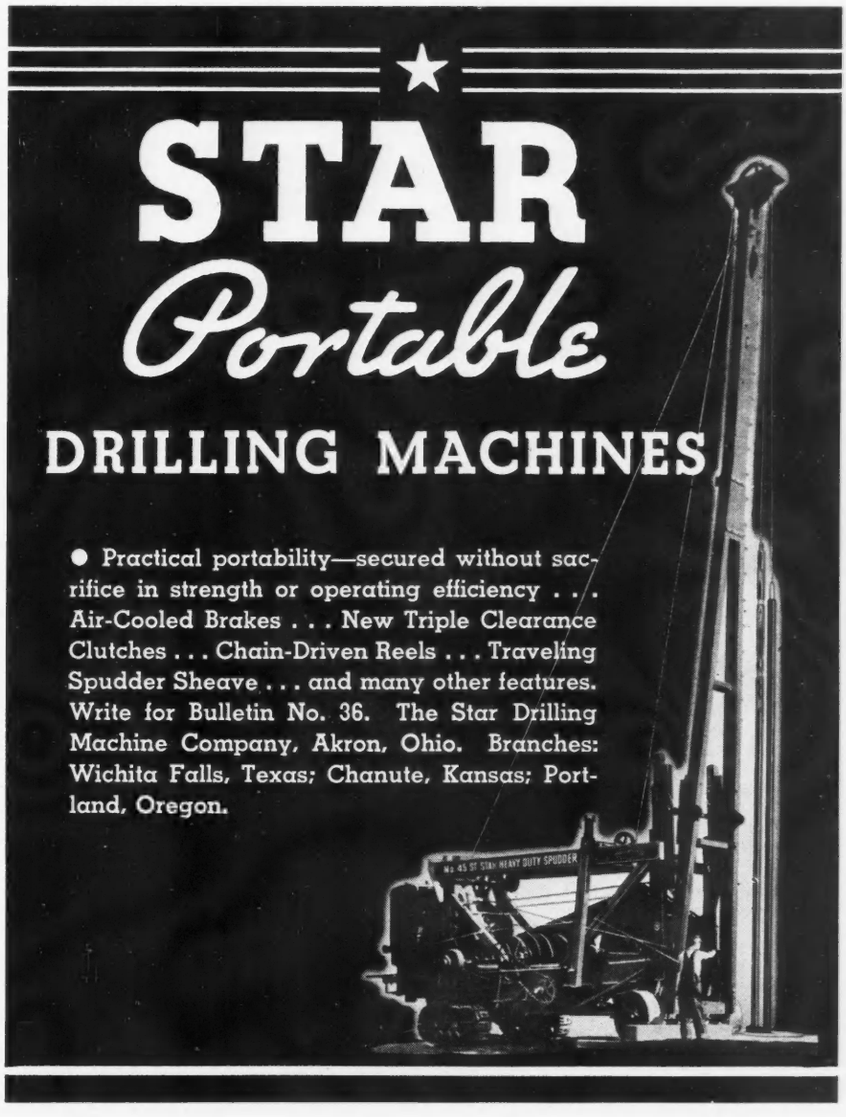
GOLIAD COUNTY—R. B. Swiger's Carrie Wood 1, blk 23, Swiger subd, Wood Ranch, George Villa sur, 15 mi s Goliad, 2 mi e Keystone's Wood 1, still wor.

GUADALUPE COUNTY—W. D. Bacon et al's O. D. Halm 1, Joseph Kent sur, 2 mi s Kingsbury, td 1903 ft in Buda, sd top chalk 1652 ft. Louis Crouch et al's Mary E. King 1, 80-ac lease J. D. Clements sur, ¼ mi se Zaboroski area, dr 1654 ft. La Jita Corp.'s Dan Denman 2, midway between S. Darst Creek and Darst Creek eld, mir. W. W. Lincoln et al's A. Baenzinger 1, 125-ac tr, A. Mansola sur, Salmar area, 6 mi s Seguin, dr 1320 ft. Long & Ross' Ed Felix 1, 1¼ mi s fr New Berlin, 75-ac tr, V. Duran sur, sd 634 ft. Nick Manosis et al's William Maierhofer 1, 833 ft e of wl, 1866 ft s of nwl (road) 100-ac tr, L. A. Peters sur, 12 mi sw Seguin, dr 400 ft. Riddle Oil Co.'s E. Nolte et al 1, J. Sowell sur, 6 mi e Seguin, td 1280 ft, pb 185 ft, treated with 4000 gals, complete on pump, no gauge, opens Nolte field.

HAYS COUNTY—R. D. Kelly's W. P. Donalson et al 1, 105-ac tr, J. Vermandi gr, 1½ mi ne San Marcos, top Edwards 718 ft, still sd 721 ft. Mallory-Holcomb & Nance's J. A. Hudenrich 1, 330 ft ne and nwl of 496 ac tr in W. Hemphill sur, 2 mi se of Kyle, lcn.

HIDALGO COUNTY — Pantano Oil Co.'s (McCollum Exploration Co.) John C. Engleman, Jr. 1-B, lot 3, sec 259, Tex-Mex Ry. sur, La Mestina gr, 1½ mi se Pantana gasser, td 6805 ft, set 7⅝ in csg, wocs. James McDougal 1, lot 223, blk 1, La Blanca tr, 1½ mi s Pantana gasser, td 7720 ft, coring. Sun Oil Co.'s (H. J. Porter et al's) Sweeney Est. 1-A, lot 1, Wayne Wood subd No. 1, 6 mi sw Donna, taken over by Sun Oil Co., oil sand 5962-75 ft, dr 6210 ft. Dayle L. Smith Oil Co.'s Fairbanks and Young 1, blk 44, porc 46, 4 mi e Samfordyce field, std at 1950 ft. Union Sulphur Co.'s ARGL&I Co. 10, blk 50, N. Capisallo dist, Mercedes area, td 8306 ft, set cement plug 7530-50 ft, sdtr at 7535 ft.

JIM WELLS COUNTY—Francis & Simonton's A. Lonzano, Jr. 1, lot 111, sec 76, Holde-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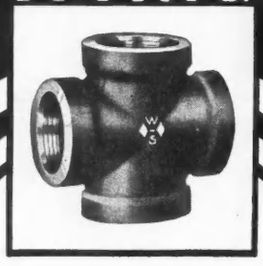

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man sub, Seeligson ranch, 4000 ft sw Graham's Bennett 1, sd 1272 ft. Gist & Graddy's B. W. Owens 1, Poitevent sur, 3 mi n Bentonville eld, sd 5308 ft. La Jita Corp.'s Frame & Bowers 1, sec 14, King Ranch sub, deep test, 4 min 14 stands oil, 100 lbs pres, ¼ and ⅜ ch, 42 gravity, set cas and dr plugs Bentonville field, dst 5681-85 ft. Stanolind O&G Co.'s Richard King 3, sec 20, but in sec 9, Richard King sub, one mile n Bentonville field, lcn.

JIM HOGG COUNTY — French Oil Co.'s Paula V. de Garza 1, sur 269, east of Alworth pool, lcn. Gifford Oil Co.'s Armstrong, 330 ft el, 1650 ft sl of sur 43, lcn.

KARNES COUNTY—De Garaffe & Reel's Cochran 1, McConnell league, 5 mi ne Riddleville, sd 200 ft.

KERR COUNTY—S. W. Forrester's J. W. Bailey 1, A. L. Starky sur No. 408, 3 mi n Ingram, sd 432 ft.

LAVACA COUNTY—Willshire Union Oil Co.'s Albert Pohl 1, 120-ac tr, M. Wooten sur, 7 mi nw of Ezzell, sd 1850 ft.

LA SALLE COUNTY—Kennedy & Johnston's Gilmer & Wildenthal 1, 140-ac tr, sur No. 283, Santonis Carrasco sur 28, 8 mi se Cotulla, dk and sd. W. H. Vernor's M. C. Jefferies, sec 726, HE&WT RR sur, 10 mi se Artesia, still sd 850 ft.

LIVE OAK COUNTY—J. H. Durbin's J. D. Marback 1, 429-ac tr, Stephen Hays sur, 2½ mi sw Whitsett, still sd at 922 ft. Hagan & Stewart's S. A. Joint Stock Land Bank 1, J. Turner sur, 5 mi s and n of Three Rivers, td 860 ft, cored gas sand. Martell Pet. Co. and Sterrett's Whitsett, dr 310 ft. Oil Fuel Supply Co.'s H. J. Rosebrock 1, Louis Romelo sur, Oakville area, td 2808 ft, Pettus 2797-2808 ft, 7 in csg 2800 ft, complete, 23 bbls 15 hrs, ¼ ch. V. G. Schimmel's Geo. West Est. 1, 160-ac tr, J. Poitevent sur 231, 3½ mi sw Geo. West, ru and sd. Jack Sterrett et al's Border National Bank 1, 250 ft se and 150 ft ne of e cor of 100-ac Brown tr, but in Border National 228-ac tr, S. Hays sur, 1½ mi sw Whitsett, lcn. Sun Oil Co.'s J. G. James 1, 1258.3 acre, Patrick McGloin sur, ab 28, 1½ mi w Mikeska, abnd 5030 ft.

LEE COUNTY — Eleoussa Oil Co.'s Ira Sanders 1, 102-ac tr, J. Von Roeder sur, dr 2555 ft. James E. Pederson's C. A. Turner 1, D. Hudson sur, 1½ mi se Tanglewood, td 6560 ft, dr 4925 ft, in sdtr hole.

MAVERICK COUNTY — J. W. Boicourt's Edson & Estrada 1, James Eaves sur 68, 12 mi n Eagle Pass, dr 1720 ft. Rio Development Co.'s Winchester Kelso 1, 294-acres in sur 2, 3 mi ne of Eagle Pass, td 1003 ft, mi rotary rig.

McMULLEN COUNTY—Humble's H. C. Edrington 2, e½ sec 59, AB&M sur, 6 mi ne Seven Sisters field, 2640 ft w No. 1, abnd 3053 ft. Humble's H. C. Edrington 3, 330 ft s and el of n½ of AB&M sur No. 55, 2 mi ne No. 1 Edrington. Edwin N. Jones' Harry Ezzell 1, 160-ac tr, sec 3, Ezzell Ranch subd, Thomas Adams sur, 5 mi nw Simmons City, blew out 1240 ft, still running wild.

MEDINA COUNTY — Frank A. Brown's Jack Bilhartz 1, 2325 ft wl and 225 ft sl of 200-ac tr s part of sur 24, J. Campbell sur, 12 mi se Hondo, dr water well. Joise Oil Co.'s Medina Irrigation Farms 1, lot 1, blk 32, sec 7, Medina Irrigated farms subd, 1¼ mi e Devine, dr 1735 ft sh, R.P. E. P. Ruhmann, Sr.'s E. B. Chandler Est. 1, 2382 ft sl, 150 ft el of 380-ac tr, Chas. Decher sur No. 461, coring 910 ft. Whitfield's W. M. Odem 1, Henry Castro sur No. 177, ne of Taylor field, sd 810 ft. G. Whitting et al's Hondo Nat'l Farm Loan 2, sec 214, Geo. Studer sur, ½ mi ne Hondo, sd 1200 ft in Georgetown for orders. Will A. Wycoff's T. J. Bendele 1, 321.5-ac tr, James Barnhart sur 593, ab 1733, s mi s D'Hanis, sd 208 ft. F. J. Bendele 2, 1880 ft el, 200 ft sl of 320-ac tr, sur No. 117, 9 mi sw Hondo, sd 215 ft, woo.

NUECES COUNTY—I. J. Allen and Seaboard Oil Corp.'s J. D. Chapman et al 1-A, sec 40, Laureless Farm tracts, 15 mi sw Corpus Christi, old well, ru to dd from 5606 ft. R. B. Bryant & H. H. Howell's Antone Kocurek 1A, 58-acres of s 113 acres of 172.5-ac tr, J. H. Smith sur 25, 1 mi s Clarkwood, relief well to wild crater, lcn. Al Buchanan & Blanco Oil Co.'s W. S. Gandy 1, 4½ sec 60, George H. Paul subd, 1 mi n Clara Driscoll field, dr 4595 ft. Camp Prod. Co.'s C. Phillip Wardner, Tr. (was Chas. E. Stratton) 1, Stratton area, wo fuel to sp. Conroe Dr. Co. and H. M. Reed's J. L. Meyers 1, lot 4, blk F, sec 107, ½ mi s Clara Driscoll field, abnd 4503 ft. Mrs. N. J. Griffith 6, Frank sur No. 416, Saxet, reaming gasoline sand 6725-59 ft, 7 in cas 6770 ft, dr plugs. Lockhart Bros. Mable Eliff 1, 4501 ft el, 466 ft sl of 3054.9-ac tr, Antone Longaria sur, 1 mi sw Texon Eliff 1, ru. N. S. Moss et al's R. H. Coleman 1, of 320-ac tr, sec 226, Bishop subd, Palo Alto gr, s of Agua Dulce field, coring 6830 ft. Phillips Pet. Co.'s Rand Morgan 4, sur 405, Saxet field deep test, td 6740 ft, set 7 in csg 6428 ft. G. M. Richardson et al's R. S. Carter 1, nw ¼ of sec 8, Laureless Farm tract, 8 mi s Corpus Christi and 2 mi se Londow, abnd 6557 ft. Sta-Mex Oil & Gas Co., Inc.'s Oliver Bird 1, E. R. Oliver sur No. 162, 3 mi w Flour Bluff field, set sur cas, wocs; Cox & Cryer 1, 72-ac tr, Ward & Callagher sur No. 316 and 166, sd 4000 ft, still wo water. Teague & Associates' A. M. Poenisch 1, lot 2, blk 32, Flour Bluff and Encinal Garden tracts, 3 mi w Flour Bluff field, old well orig abnd by Hueburt et al, running electric formation tester. Texon Dr. Co.'s Clara D. Sevier 2-B, relief well, 880-ac tr, W. W. Chapman lands, Palo Alta gr, s Agua Dulce, set 350 ft 16 in cas, still sd; Mable Eliff 1, 3054-ac tr, A. Longria sur, s Agua Dulce, td 6547 ft, sd wor. United Prod. Corp.'s W. H. Harvey 1, 1100 ft e and 1000 ft sg most northwesterly cor of 162.34-ac tr, Garcia sur, Chapman subd, Palo Alto gr, ½ mi sw prod of Agua Dulce field, lcn. Wellington Oil Co. & Pan-American Prod. Co.'s Clara Driscoll Sevier 1-A, Wm. Gamble sur, se of Clara Driscoll field, td 6075 ft, set 5 in cas, to td, dr plugs; Myrtle L. Stockton 1, 330 ft s and wls of ne¼, sec 25, Laureless Farm Tracts, Ramon de Ynojosa sur, 12 mi sw Corpus.

REAL COUNTY—Sun Oil Co.'s Dietert & Oppenheimer 1, sec 7, GWT&P RR sur, 20 mi nw Leakey, dr 2440 ft.

REFUGIO COUNTY—Paul Meader's Temple Lumber Co. 1, sec 1, G. W. Maine sur, ab 218, 2 mi sw Austwell, sp. Windsor Oil Co.'s G. W. Bissett 1, John Crockett sur, 1 mi nw of Tivoli, set sur cas, wocs. Wynn Drlg. Co.'s Mrs. C. D. Roache 1, 14,000 ft nel, 5850 ft sel of John Patrick, Thomas and Jas. Douney sur, center blk 15, Morgan Bros. subd, 8 mi sw Woodsboro, lcn.

SAN PATRICIO COUNTY—W. B. Craig's A. E. Nelson 1, s½ sec 7, first add Taft Farm Lands, 2 mi sw Taft field, sd Eleanor Oil Co.'s W. W. Toland 1, 8000 ft n Kline 1, lot 15, blk "A", Coleman-Fulton Pasture subd, 2½ mi e Gregory, dk and sd. Golding & Fearis' Turner Bros. 1, 330 ft sl and el blk 6, Masterson subd, Turner Ranch, Samuel M. Edward sur, 4½ mi w White Point, 3 mi se Odom, ru. Hooper & Rutherford, Inc.'s J. D. Willis 1, Gregory area, T. T. Williamson sur, e offset to Eleanor's Kline 1, sd 7213 ft, may abnd. Texon Royalty Co.'s J. H. Harvey 1, blk 13, Rincon subd, Geo. Sargent sur, ab 231, 4 mi n Gregory, abnd 6517 ft.

STARR COUNTY—Howard Bass' Hayden et al 1, s½ blk 4, sur 7, porc 80, 5½ mi ne Rio Grande City, td 1444 ft, pb to test 1308-

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15 ft. F. Davenport and Slick Urschel's T. B. Slick Est. 1, sec 485, 20 mi ne Rio Grande City, sand 5570-89 ft, sd for repairs, top Jackson 5560 ft. E. A. Graham's Yturria et al 1, 230 ft sl and el 29.96-ac tr, por 100, 1500 ft n of west end Samfordyce field, coring 2950 ft. Moss and Heard's S. B. Ricaby 1, por 83, 6 mi ne Rio Grande City, coring 1212 ft. Sun Oil Co.'s J. F. Orr 1, M. Gonzales sur, 4½ mi s Cuevitas field, coring 3370 ft.

VICTORIA COUNTY — Magnolia's Willie Beck 1, T&NO Ry. sur No. 1, 4½ mi nw Telferner, td 4812 ft, pb to 4112 ft, 7 in csg set 4100 ft, flowed gas, ¼ ch, tubing pressure 1300 lbs., salt water broke in, still trying to cut off water flow. Plymouth Oil Co.'s J. J. Welder 1, Samuel Belding sur, 7 mi e Nursery, td 6648 ft, pb, will sdtr.

WEBB COUNTY — American Texas Oil Co.'s Wm. McKendrick 1, por 46, near Rio Grande River, dr 1646 ft. French Oil Corp.'s D. G. Garcia 1, sec 1121, 3 mi ne Oilton, dr 2130 ft, sand 2122-27 ft, tested oil and sw, abnd 2234 ft. Frank J. Gravis' Armando Villareal 1, 330 ft n and w of n cor sw 525 and on sur 2260, loc. Kirkwood & Margan Frost Nat'l Bank 1, 33 ft sl, 990 ft el sur 734, lcn. Lutex Oil Co.'s Lone Star Cons. 1-A, blk 26, SS&B sur, por 12, sd 850 ft. Paul Meaders' F. C. Garcia et al 1, e¼ sur 1101, 2 mi n Mirando City, ru. Rowan & Hope's A. M. Bruni 1, blk 2, sec 857, 5 mi se Mirando City, td 2428 ft, dr by last bit at 2405 ft. Superior Oil Co.'s Masterson 1, sec 35, abnd 2035 ft. Smith and Taggart's Sue Jones 1, sec 674, Ruck Transportation sur, 12 mi ne Mirando City, lcn. Wilcox O&G Corp.'s Puig Bros. 1, sec 9, Loma Blanco Pasture of Joaquin Galan gr, sur 2183, dr 3700 ft.

ZAPATA COUNTY—W. C. Bob's J. M. G. Martinez 2, s¼ blk 22, W. R. Duke subd, Randado gr, 1 mi w Charco Redondo field, sd. J. D. Long and Sam Evans et al's 220-ac tr, Villa gr, dr 1220 ft.

ZAVALLA COUNTY—J. F. Wilcox's T. J. Gillam 1, sw¼ sec 11, blk A, GWT&T Ry. sur, 6 mi ne Batesville, dr below 80 ft.

TEXAS GULF COAST

BRAZORIA COUNTY — Beaty, Bowles & Borsodie's Truska 1, Algoa prospect, H&TB sur No. 6, dr shale 8865 ft. Bunte's Fite 1, Sandy Point prospect, D. Talley sur, dr shale 4705 ft.

CHAMBERS COUNTY—Laverne Decker's Johnson 1, ne of Anahuac, T&NO sur, sec 30, dr shale 6289 ft. Salt Dome Oil Corp.'s Lawrence 1-A, Cotton Lake area, S. Barrow sur, preparing to reperforate at 6538 ft. Sun's White Estate 2, Seabreeze prospect, T&NO sur, sec 128, preparing to test at 8715 ft.

FT. BEND COUNTY—Sam Harrison's Horak 1, Needville prospect, H&TC sur, sec 36, abn 7025 ft.

GRIMES COUNTY—Fred Harris's Chaney 1, 5 mi w of Mesa, M. Donohue sur, abn 3018 ft.

HARRIS COUNTY—B. A. Farrell & J. B. Cox's Bender Estate 1, w of Humble field, M. W. Travis sur, dr shale 608 ft. Geo. Lawrence's Zapp 1, Bammel prospect, J. Farwell sur, sd 6525 ft. Stanolind's J. Warren Minerals 1, Hockley area, H&TB sur No. 1, dr shale 698 ft. David B. McDaniel's Gilbert 1, Gilbert ranch prospect, J. Ricord sur, abn 7305 ft.

JEFFERSON COUNTY — Sun's Hebert Broussard 1, Labelle prospect, W. B. Burton sur, woc 8217 ft.

MATAGORDA COUNTY — Continental's Robbins 1, Citrus Grove prospect, C. Franz sur, dr shale 3320 ft; same operator's Hawkins 1, Sheppards Mott area, D. McCarthy sur, abn 5140 ft. Hammon Exploration Co.'s Croker 1, South Bay City field, E. Hall sur, setting casing at 9575 ft. Strake's Sargent 1, Poole Ranch area, L. E. Parker sur, sdtr 4400 ft. Sun's Craig 2, Hawkinsville area, J. Williams sur, dr rock 2241 ft.

MONTGOMERY COUNTY—W. W. Chapman's Foster 1, Willis area, D. Pevehouse sur, dr shale 2568 ft.

POLK COUNTY—J. E. Dorrance's Wings 1, nw corner of county, I&GN sur, abstract 713, comp 520 bbls daily ¼-in choke 5194 ft. Peyton Brothers' Kirby West B-1, Ace area, J. S. Thomas sur, woc 4898 ft.

TRINITY COUNTY — D. E. Boone's R. Tullos 1, nw part of county, W. M. Watson sur, sd 1310 ft.

TYLER COUNTY — Republic-Houston Oil Company's Hurd Fee 1, se of Spurger field, N. Hurd sur, pb 7670 ft, woc.

WALKER COUNTY — A. U. Morrison's Nolte 1, w of Huntsville, Wm. Hodge sur, abn 3025 ft.

WASHINGTON COUNTY — Stapper Oil Corp.'s Hoxie 1, S. Sample sur, abn 3124 ft. Sun's Lauter 1, Clay Creek area, N. Clay sur, fsh 7507 ft. Smith & Schlenker's Hoddle 1, nw of Brenham, J. Clark sur, dr shale 312 ft.

WHARTON COUNTY — Plummer & Felmont's L. Logue 1, Spanish Camp prospect, S. F. Austin sur No. 3, dr shale 3311 ft.

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CONNECTING FLANGE
Rector Well Equipment Company

Rector Well Equipment Company, Ft. Worth, Texas, has added to its line a specially built connecting flange for use with Rector heads. This flange provides users of this head perfectly matched threads which are made on the same templates as the inside threads of the top flange of the head and held to such close tolerances in manufacture that a pressure tight connection is assured.

This flange is made of nickel chromium forged steel, and tested to 6,000 pounds. It is the standard A.P.I. gate valve flange, as to diameter, bolt circle and ring groove. Use of the flange eliminates the threaded connection between the nipple and master gate and, due to its matched thread, assures, according to the manufacturer, a pressure tight connection at the remaining thread. All of the features found in the Rector head are retained, including ability to work the hanger down and nipple up under even hazardous conditions, full repackability under pressure, and entire elimination of spools which prevent changing the pipe program in an emergency, the manufacturer claims.

One of the outstanding features of the new connection flange is that its use permits backing out the Christmas-tree in event of trouble during completion or after the well is on production.

One of the immediate reasons for developing this particular flange for use with Rector heads was the recent thought given by production men to leaks in threaded connection in casing and the various means figured to overcome the leaks. Some engineers even advocated eliminating all threaded connections in the surface fittings, but this would have had to be done as a compromise, sacrificing other values to attain connections fully flanged. Also, it was realized that the "all flanged" hookup would not mean the entire elimination of possible thread leaks, since there are approximately 240 threaded connections in a 7200-foot oil string. The Rector flange was developed on the fact that thread leaks are more likely to occur when the threads of one manufacturer are connected to those of another manufacturer, due to A.P.I. allowed tolerance.

WEIGHT INDICATOR
Martin-Decker Corporation

Martin-Decker Corporation, Long Beach, California has announced a new type weight indicator that will be called the 'Clipper" Multiplex Toolpusher.

The manufacturer claims the new instrument has laboratory accuracy and sensitivity, with the necessary simplicity and ruggedness to withstand oil field abuse.

It was designed for operators desiring a unit type of weight indicator.

The "Clipper" is a self-contained, readily portable weight indicator which is calibrated at the factory and arrives at the rig ready to attach to the dead line. It will require no further pumping up or adjusting and regardless of hot weather or cold, will always provide the same sensitive, accurate readings, the manufacturer claims.

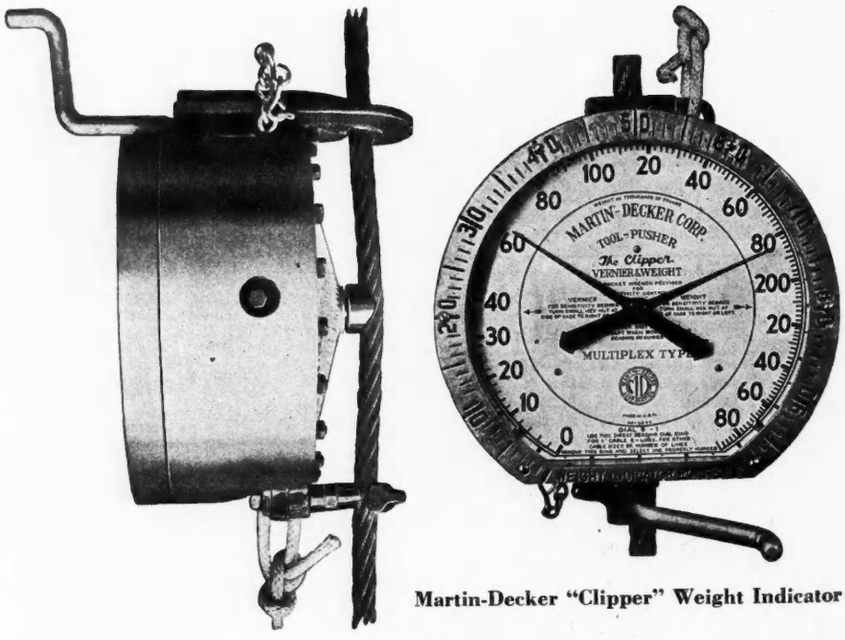
It is essentially an instrument for those not requiring or desiring a chart record. It is especially adaptable to drilling conditions where installation time is a factor. Urgent need for such a design usually exists in a shallow territories, in all production work, such as handling rods and tubing, setting packers, liners, etc., in the handling and especially in the pulling of casing with cable tools; in emergency fishing jobs and al sorts of drilling oerations, providing an instrument which can be carried from well to well by the toolpusher and can be quickly installed on any drilling or production job.

By unique design, all projecting parts, such as hinges, hasps, rings, etc., have either been eliminated or streamlined, thus precluding the possibility of tong lines or cat line becoming fouled on the instrument.

The weight indicator is an extremely rugged instrument, weighing only 47 pounds, with the weight concentrated close up to the dead line. The maximum dimension is only 13 inches; the thickness seven inches. The light weight, with close dimensions, practically eliminates the tendency for this type of instrument to swing while on the line, it is claimed.

The aluminum gauge case is made waterproof; tubing is connected solidly through the back of the case to the diaphragm by means of special fittings; the thin shatterproof glass is set behind a streamlined gauge ring in a molded rubber gasket, which is "U" shaped in cross-section, and all held securely in place by six heavy gauge ring screws.

The dial faces are non-glare and are etched with a design of numeral, which is clear and distinct. There has been no sacrifice made to the size of the gauge dial. These two factors are of import-



Martin-Decker "Clipper" Weight Indicator

ance because the instrument is usually located on the opposite side of the derrick floor from the driller.

Fluid is used as a means of operation because it provides a positive, accurate, controllable means of converting the tension in the dead line to pounds load on the hook or derrick. The fluid used in the instrument is non-freezing, capable of withstanding temperatures considerably lower than 40° below zero Fahrenheit. It is non-corrosive.

No outside tubing connections or filling means are provided. The instrument is vacuum-loaded at the factory with the exact amount of fluid necessary. After filling, it is subjected to pressures far in excess of those that will be encountered in actual service and left under test for six days. Only after the finished weight indicator has successfully withstood this pressure test is it shipped.

The instrument provides two methods of load indication; one method showing the load in points, and the other method providing the operator with load readings directly in thousands of pounds. This is accomplished by the use of quickly interchangeable calibrated dial rings that read directly in thousands of pounds load. Ten of these calibrated dial rings are provided with each instrument, which cover the various combinations of line "strings" for 1-inch, 1⅛-inch and 1¼-inch drilling lines. The multiple dial system is used because it is impossible for a single direct reading dial to provide accuracy under all conditions of line strings and different types and sizes of lines. The dial rings are nested at all times in the waterproof case, where they are protected from damage or loss, and are easily removable without the necessity of removing the gauge hands. This avoids disturbing the calibration of the gauge.

Weight Indicator points are shown on the outside of the gauge ring and for those drillers not accustomed to reading the dead line load in thousands of pounds, makes points to pounds conversion simple.

The "Clipper" is equipped with the super-sensitive vernier, which is six times as sensitive as the regular weight indicator. Both the vernier and the weight indicator are provided with sensitivity controls which may be regulated by the driller to provide the sensitivity required. A simple safety device eliminates the possibility of the instrument being accidentally disengaged completely from the dead line by a sudden jerk caused from slack being thrown in the line or when jarring on casing, etc.

ROCK DRILL

Worthington Pump and Machinery Corporation

Worthington Pump & Machinery Corporation, Harrison, New Jersey, has introduced a special light and portable drilling rig that was designed to handle the many classes of drilling calling for equipment lighter than the heavier type wagon drills. It is especially adapted to down-hole drilling, line drilling, hillside drilling, snake holing, and all types of "post holing" operations, provided they do not require holes more than 18 feet in depth. The new drill is equipped with pneumatic tires so that the outfit may be collapsed for ready towing behind an automobile, truck or tractor.

This Week with the Industry's EQUIPMENT SUPPLIERS

New York Belting Appoints Distributor

B. F. Ruether, general manager of New York Belting & Packing Company, has announced the appointment of R. B. Moore, Bolivar, New York, with a branch at Bradford, Pennsylvania, as distributor of the complete line of New York Belting & Packing Company mechanical rubber goods.

Manhattan Rubber Opens San Francisco Branch

The Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Inc., Passaic, New Jersey, is opening a new West Coast branch office and warehouse at 778 Brannan Street, San Francisco. The latest addition to Manhattan's distribution is to be under the management of A. R. Bradshaw, who has represented the company for many years. All standard brands of Manhattan hose and belting will be carried in stock.

New General Electric Building at Houston

General Electric Company has completed plans for the immediate erection of a new $200,000 building in Houston, Texas. The building will be located on a block bounded by Polk, St. Charles, Clay and Live Oak streets, with the main entrance on Live Oak Street. The new building will be of brick and steel construction and will be two stories in height. It will be used to house the offices, warehouses, and service shops of General Electric Company, General Electric Supply Corporation, and General Electric X-Ray Corporation.

In addition to the 62,500 square feet in the block, General Electric has obtained title to 7200 square feet adjoining the block on the west, for trackage purposes. The contract for the construction of the building has been awarded to H. K. Ferguson Company, of Cleveland.

Five Vice Presidents Elected By General Electric

Five new commercial vice presidents have been elected by the board of directors of General Electric Company, it has been announced by President Gerard Swope. They are:

M. O. Troy of Schenectady, manager of the central station department.

L. T. Blaisdell of Dallas, southwestern district manager.

E. H. Ginn of Atlanta, southeastern district manager.

A. L. Jones of Denver, Rocky Mountain district manager.

T. S. Knight of Boston, New England district manager.

Troy entered the employ of General Electric Company, in the testing department, in 1897, a year after graduation from the University of Virginia. He was subsequently transferred to Lynn as foreman of transformer test, and in 1898 became associated with Professor Elihu Thomson and Richard

These oil company buyers and others were guests of Maloney Tank Manufacturing Company, Tulsa, on a recent inspection trip through the company's factory there. Seated, left to right—H. H. Hough, Amerada Petroleum Corporation; C. D. Taylor, Barnsdall Oil Company; N. C. Draper, Shell Petroleum Corporation; C. W. Cotton, C. W. Cotton Company; J. S. Hawley, Stanolind Oil & Gas Company; H. M. Cosgrove, Tulsa Purchasing Agents Association; H. R. Powers, Chamber of Commerce.

Second row, standing, left to right—E. R. Welch, Tulsa Purchasing Agents Association; E. A. Taggart, W. C. Norris Company; E. J. Boydstun, Turman Oil Company; O. E. McClatchey, Barnsdall Oil Company; J. S. Warren, Maloney Tank Manufacturing Company; W. R. Brown, Ohio Oil Company; James Morgan, Maloney Tank Manufacturing Company; J. R. Stockton, Mid-Continent Petroleum Corporation.

Back row—E. J. Gebhart, Sherwin-Williams; C. G. McLaren, Shell Petroleum Corporation; J. Dorman, Bridgeport Machine Company; Frank Neely, Superior Oil Corporation; H. A. Wilson, Superior Oil Corporation; H. P. Hellinghausen, Oklahoma Pipe Line Company; George Showalter, Mid-Continent Petroleum Corporation; E. A. Wolfe, Barnsdall Oil Company; O. G. Houser, C. W. Cotton Company, and B. L. Young, Barnsdall Oil Company.

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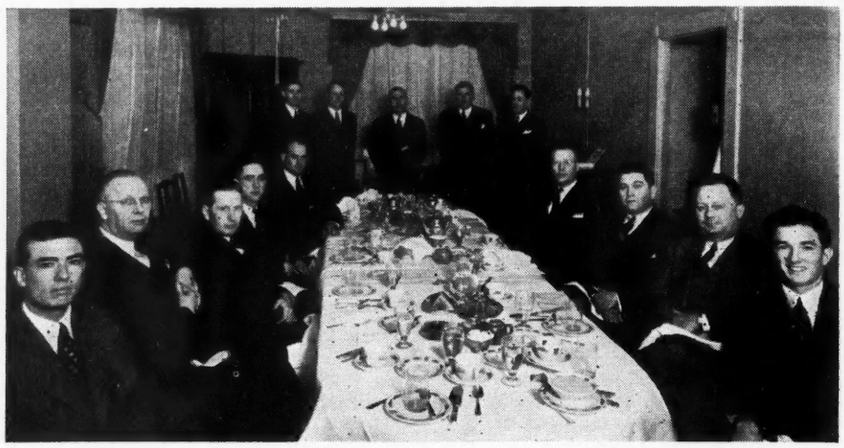

Several executives and representatives of Taubman Supply Corporation and Bethlehem Steel Company were caught at a recent breakfast conference in Houston. Taubman Supply Corporation, organized 20 years ago by Herman Taubman, has been purchased by the Bethlehem company. Taubman will remain as active head of the new company.

Seated left to right: Sol Taubman, Houston office, Taubman Supply Corporation; G. A. Thompson, vice president and sales manager, Taubman Supply Corporation, Tulsa; M. N. Sole, branch manager, Taubman Supply Corporation, Corpus Christi; P. R. King, special representative, Taubman Supply Corporation, Houston; M. O. Whitehead, branch manager, Taubman Supply Corporation, Longview; F. M. Huffman, manager sales department, Bethlehem Steel Company, St. Louis; William Chapman, sales department, Bethlehem Steel Company, St. Louis; Herman P. Taubman, president, Taubman Supply Corporation, Tulsa; C. H. H. Weikel, manager commercial and industrial research, Bethlehem Steel Company; J. E. Moore, district manager, Bethlehem Steel Company, Houston; V. W. Bailey, purchasing agent, Taubman Supply Corporation, Tulsa; A. L. Kornfield, district manager, Taubman Supply Corporation, Houston; C. C. Crider, vice president, Taubman Supply Corporation, Dallas; and Mickey Taubman, Houston office, Taubman Supply Corporation.

Fleming in pioneer work on constant current transformers. In 1901, Troy was made assistant engineer of the Lynn alternating-current engineering department, and was later transferred to the transformer sales department. In 1907 he became manager of sales of transformers, lightning arresters, and regulators. In 1923, when the lighting department became the central station department, he was appointed executive assistant manager. Troy became manager of the department in 1928. He is a member of the sales committee of the company.

Blaisdell, a native of Massachusetts, was formerly manager of the Washington office of the company. He has been district manager at Dallas since 1924. He entered the employ of the company in the testing department at Lynn, Mass., in 1904, at the age of 18.

Ginn, also a native of Massachusetts, joined General Electric Company in 1901, following graduation from Worcester Polytechnic Institute. He also started in the testing department. He has been district manager at Atlanta, Georgia, since 1922.

Jones, a native of New York, was graduated from Cornell University in 1904. He was at Schenectady in the testing department for three years, and in 1907 was transferred to the Denver office as district engineer. In 1928 he became district manager there.

Knight, born in Massachusetts and graduated from Tufts College in 1903, entered General Electric test following graduation. Since 1926 he has been New England district manager.

The company now has nine commercial vice presidents in charge of sales districts. In addition to those elected last month there are H. H. Barnes, Jr., New York City, New York district; W. O. Batchelder, Chicago, central district; J. A. Cranston, San Francisco, Pacific and northwestern districts; W. J. Hanley, Cleveland, east central district; and C. K. West, Philadelphia, Atlantic district.

Increase Metallurgical Staff Of International Nickel

A. J. Wadhams, vice president, The International Nickel Company, Inc., has announced the addition of Gerald R. Brophy to the development and research staff.

Brophy, who is well known in metallurgical circles by reason of his numerous papers presented before the engineering societies, and his many contributions to the technical press, will be located at the research laboratory of the company in Bayonne, New Jersey. His time will be devoted largely to research problems relating to nickel alloy steels, nickel cast irons and other ferrous materials.

Worthington Will Absorb Subsidiary

Worthington Pump & Machinery Corporation will absorb its subsidiary, Carbondale Machine Corporation, as of January 1, 1937. Carbondale organization, products, and sales activities will be continued as a division of Worthington.

Paul Cavins Visits Mid-Continent Area

Paul Cavins, president of The Cavins Company, Long Beach, manufacturer of the Cavins automatic hydraulic suction bailer and fishing tool, made a business tour of the Mid-Continent last month.

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Better Production Control Features February Results . . . . Mar. 2 12
January Gains—Report of Bureau of Mines Shows Encouraging Factors . . . . . Mar. 16 32
Industry Makes Further Progress—First Quarter Is Favorable as More Gains Made in March . . . . . April 6 12
L. J. Logan
February Down—Bureau Report Shows Good Control of Output . . . . . April 13 16
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Reports Are Encouraging—Figures Favorable for June and for First Half of Year . . . . . July 13 40
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L. J. Logan
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U. S. Crude Oil Production Sets New All-Time Record . . Aug. 17 54
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Jack Logan
Bureau June Report Shows July Production to Be Under That of June . . . . . Sept. 14 16
Bureau July Report—Production and Crude Runs Down and Demand Climbs . . . . . Sept. 21 12
Bureau Statistics Production Reaches All-Time Peak During August . . . . . Oct. 19 62
All-Time Peak—Record Output Is Far Above Bureau Figures . . . . . Oct. 26 57
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Bureau Report—September Production Was Lower Than in August . . . . . Nov. 9 98
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Eye Import Revenue Only Appeal of Disney Bill Is Easy Taxing . . . . . Feb. 24 8
Tax Revisions—Roosevelt Urges Changes; Gasoline Levy Suggested . . . . . Mar. 9 8
Pipe Line Taxes—Intangible Value Hearing Expected in Early July . . . . . June 15 23
Reduction in Oil Taxes in Texas Is to Be Sought . . . . . Sept. 7 11
Pipe Line Value In Texas Now Assessed at $58,056,000 by Board . . . . . Sept. 14 8
Federal Taxes Collections on Gasoline Up Nearly 50 Percent . . . . . Sept. 28 25
More Texas Tax—Oil May Help Defray Old Age Pension Expense . . . . . Oct. 5 10

Association Activities, Conventions, Expositions

American Association of Petroleum Geologists

A. A. P. G. Make Annual Meeting Plans.....Jan. 20 47
Geologists Program Associate Bodies Meet at Tulsa March 19-21 .....Feb. 24 18
Geologists Meeting—Three Societies Plan Useful Tulsa Session .....Mar. 16 173
Reed Heads Geologists—Need for Advance in Methods Pointed Out .....Mar. 23 9
Coast Geologists—Elect Harry R. Johnson as President for Ensuing Year.....Nov. 9 22

American Chemical Society

A. C. S. Convention—Chemists Can See No Need for Alarm Over Reserves.....Sept. 14 8

American Equipment Suppliers' Association

Suppliers Elect—W. J. Morris of Dallas Heads Equipment Men .....Nov. 16 16

American Gas Association

Seek New Markets—Gas Companies Pledge Help to Association in Drive .....May 11 8
Pollard Elected President Pacific Coast Gas Association.Aug. 31 14
18th Gas Convention Study Business Problems and Elect New Officers .....Nov. 2 9

American Institute of Mining and Metallurgical Engineers

A. I. M. E. Meeting Preliminary Program is Quite Comprehensive .....Jan. 13 50
Gulf Coast Section of American Institute of Mining and Metallurgical Engineers is Organized.....Jan. 20 14
Show Need of Reserves—Engineers Reiterate Need for Finding More Sources.....Feb. 24 10
Wm. V. Gross
Elect Lovejoy—Marsh is Named Chairman Production Division of A. I. M. E.....Feb. 24 12
Lucas Award—A. I. M. E. Establishes Memorial to Coast Discoverer .....Mar. 16 30
Meet at Norman—A. I. M. E. Chapter Will Join With Students .....April 13 18
Largest Show Opens—International Exposition Far Ahead of Other Years .....May 18 43
Exposition Record—Enthusiasm Engenders Plans for Bigger Show in Two Years.....May 25 8
A. I. M. E. Pacific Coast Engineers Have Good Sessions.Oct. 5 9
A. I. M. E. Engineers Meet at Fort Worth This Week..Oct. 5 10
A. I. M. E. Meeting—Current Technical Problems Feature Varied Program.....Oct. 12 8

American Petroleum Institute

Plan A. P. I. Meet—Mid-Continent Section is to Meet at Wichita .....Jan. 20 48
Elect Officers—A. S. Ritchie Is New Head of Kansas A. P. I. Chapter .....Jan. 20 49
A. P. I. Meeting—Interesting Program is to Attract Many Men .....Feb. 10 9
Secondary Recovery—Economy of Production is Theme of Wichita Meeting .....Feb. 24 9
Warren L. Baker
Good A. P. I. Program—Southwestern District Meets at Shreveport April 9 and 10.....Mar. 30 16
Timely Program—Southwest A. P. I. Names R. D. Risser as Chairman.....April 13 8
Warren L. Baker
Good Coast Session—Californians Elect Silent A. P. I. Division Chairman .....April 20 24
A. P. I. Preliminary Schedule for Mid-Year Meeting Given .....April 20 132
A. P. I. Eastern Sector Meets June 4 and 5.....April 20 134
Many Expected for the A. P. I. Meeting in Tulsa.....May 11 10
Seeking Economies—"Productivity Index" Study Occupies A. P. I. Session .....May 18 39
Eastern A. P. I. Division of Production to Meet at Pittsburgh .....June 1 9
Byles Sees Surplus—Tells A. P. I. Eastern District Supply Is Increasing.....June 8 9
A. P. I. Meeting—Variety of Topics Listed on Preliminary Program .....Oct. 12 9
A. P. I. Meeting Opens—Varied Subjects of Wide Appeal Are to Feature Annual Program.....Nov. 9 35
Caution and Confidence—Keynotes of Seventeenth Annual A. P. I. Gathering in Chicago.....Nov. 16 8
Axtell Byles Re-Elected—Leovy Is Made Chairman of A. P. I. Executive Committee.....Nov. 16 9
Practical Application of Fundamental Research Interests A. P. I. Division of Production.....Nov. 16 10
Warren L. Baker
Progress Is Made—A. P. I. Committees Cover All Phases of Production Problems and Practices...Nov. 16 12
Brad Mills

American Society of Mechanical Engineers

Hartford to Speak—Tulsa Engineers to Hear A. S. M. E. Officials .....Jan. 20 47
Many Subjects—A. S. M. E. Hears Wide Range of Topics Discussed .....June 22 9
A. S. M. E. Meeting To Be at Niagara Falls on September 16-19 .....Sept. 7 12

Independent Petroleum Association of America

A. P. A. A. Meeting—Economic Problems of the Industry to Be Featured .....Nov. 23 10
I. P. A. A. Meeting—Number of Wells Drilled Foremost Topic at Sessions .....Dec. 7 12

International Petroleum Exposition

New Device Exhibit—International Exposition to Donate Display Space .....Jan. 6 16
Tulsa Is Host—Meetings and Exposition Are to Attract Many .....May 11 9
Largest Exposition—Every Class of Equipment Is on Display at Tulsa Show.....May 11 18

Mid-Continent Oil & Gas Association

Hamon Elected President Mid-Continent Association in Texas .....Jan. 20 9
Elect Directors—Texas Mid-Continent Oil Association Reorganizes .....Jan. 27 10
To Become Active—Draft Platform for Texas Division of Association .....Feb. 3 14
Study Oil Taxes—Association Joins Others in Fight on Unjust Taxes .....Feb. 10 9
Texas Meeting—Mid-Continent Association Discuss Economic Problems .....Dec. 7 10
Re-Elect Officers—Mid-Continent Association Re-Elects All But One .....Dec. 21 10

National Oil Scouts Association

Scouts Meet—Annual Convention to Be Held the Last of May .....April 6 54
Successful Meet—Scout Convention Largest in Organization's History .....June 8 10

Oil-World Exposition, Inc. (Formerly Oil Fields Engineering and Equipment Exposition)

Expect Foreign Men—Houston Exposition Sends Invitations to Oil Men .....Jan. 6 56
Equipment Displayed at Houston Show Includes Array of Standard and Specialty Products.....April 20 74
Non-Profit Show—Houston Men Organize to Plan Oil Expositions .....April 27 8
Houston Oil Show—Equipment and Engineering Exposition Closes 1936 Stand .....April 27 10
Houston Oil Show—Steps Toward Permanent Organization Are Taken .....June 15 23

Pennsylvania Grade Crude Oil Association

Outlook Is Good—Pennsylvania Crude Oil Association Optimistic .....

Petroleum Electric Power Club

Petroleum Club Elects F. M. Austin Head for Ensuing Year .....Oct. 19 9

Southwestern Gas Measurement Short Course

Short Gas Course Program Completed for Southwestern School .....April 13 18

Society of Geophysicists

Annual Meeting—Society of Geophysicists to Hear Many Papers .....Mar. 9 10

World Power Conference

Power Conference—Papers Dealing With Oil Are Part of Program .....Aug. 3 10
Fuel Conservation Will Be Feature Topic of World Power Conference .....Sept. 7 11
Reserves, Conservation and Other Economic Studies Are Feature of Fuel Conference.....Sept. 14 18
Bertram F. Linz

Field Developments and Exploration

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Permian Test Near Smackover Is High Gravity.....May 11 184

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Lack of Discoveries is Likely to Cause California Shortage .....Jan. 27 51
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Extend Redondo—Other Wells Expected to Drill in District .....Jan. 27 193
New Ventura Field .....Mar. 9 68
New Maricopa Sand Well Making 725 Barrels Starts Drilling Campaign .....Mar. 23 69
Venice Extension Well Adds Much Prospective Area....April 13 77
Santa Barbara Wildcat Flows 2376 Barrels Daily.....April 20 143
El Segundo Well—Venice Extension Test Shows Heavy Pressure .....May 18 197
New Field Found—Kern County Test Flows 600 Barrels Per Day.....June 8 69
New Kern County Pool Said to Resemble Kettleman....June 15 100
New Gas Field—Nearness to San Francisco Makes Strike Important .....June 29 83
Outpost Produces—May Extend Kern Front or May Be Discovery Well .....July 27 78
Field Extended—Mountain View Outpost Shows for Production .....Aug. 3 77
Extends Mt. View—Producer Mile Southeast Has Erratic Oil Output .....Aug. 10 93
Wildcat Produces—Important Harbor District Test Pumps 200 Barrels .....Nov. 9 137

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Oil in Oriskany—Warren County Discovery Marks New Era of Activity in Pennsylvania.....Sept. 21 43
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Big Illinois Play—Major Companies Join in Intensive Lease Program .....Oct. 19 86
Kentucky Active—Recent Strikes Cause Big Lease and Drill Play .....Nov. 2 78

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New Rice County Pool.....Jan. 20 48
Fifty-Two New Fields Increased Kansas' Oil Reserve...Jan. 27 48
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Wakeeney Pool May Extent.....Jan. 27 174
New Horizon Churchill Pool.....Jan. 27 176
New Rooks Pool is Discovered.....Feb. 3 47
Barton Wildcat Gets Production.....Feb. 10 61
New Russell County Pool.....Feb. 10 61
Two Fields Extended; Shows in Several Wildcats.....Mar. 9 51
New Russell Pool—Extensions and Deeper Sand in Kansas Fields .....Mar. 16 182
Kansas Pools Extend—New Work Drops in Sunflower State .....Mar. 23 53
Find New Fields—Western Kansas Continues to be Interesting Area .....Mar. 30 52
Kansas Extensions and New Locations Feature Active Week .....April 13 57
Two New Fields Found in Kansas and Others Get Extensions .....April 20 122
Two Barton County Wildcats Promising; New Harbaugh Sand .....May 4 44
Scott County Finds Strike; Leads Other Discoveries...May 11 169
Acid Used to Complete Ellis County Wildcat.....May 25 56
New Fields—Kansas Has Interesting and Profitable Week .....June 1 53
McPherson, Barton, Rice and Ellis Counties Get New Fields .....June 8 50
Important Finds in Rice, Ellis and McPherson Counties .....June 15 84
Kansas Interest in New Fields and Extensions.....July 6 55
Five New Fields Scattered Through Five Counties.....July 27 61
Russell County Gets an Addition to Its Fields.....Aug. 10 76
Second Topeka Lime Well in Ellis County Produces...Aug. 24 51
Ellis Area Strike—Twelfth Field for County Opened by Good Well.....Sept. 28 150

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Deepest Well Flows—Clark County Test Flows 2358 Barrels Initially .....Nov. 23 60
New Discoveries—Chautauqua County Leads List of Big Developments .....Nov. 30 53
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Rodessa Extended to East.....Jan. 27 188
English Bayou and Others Get Minor Extensions.....Feb. 3 56
Rodessa Present Limits Indicate Big Recovery with Additions Very Likely.....Feb. 10 28
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Bayou Malet is Proved a Producing Structure.....Jan. 13 63
Gillis and English Bayou May be Connected.....Feb. 10 71
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New Deep Formation at Leesville Opened by Good Completion .....Feb. 24 84
Shallow Formation in Jeanerette Field Shows Oil....Mar. 2 64
New Jeanerette Sand—Houma Townsite Test is Below 10,150 Feet .....Mar. 9 62
Cass County Well Adds to Rodessa Limits.....Mar. 23 64
Acadia Parish Well Flows When Casing is Perforated..Mar. 30 62
Indications Now Rodessa Mostly in Cass County.....April 6 70
Third Jeanerette Sand Extends Field 1208 Feet.....April 13 68
New Caillou Island Sand; Two Fields Are Extended...April 20 136
Three Wildcats Show—Caddo, Lincoln, Webster Tests Looking Favorable .....May 11 181
Rodessa Production Moved Over 4 Miles in Texas.....May 18 190
Rodessa Extension Test Makes 70 Barrels Per Hour....June 8 65
Four Extensions Feature Development Work in South Louisiana .....June 15 95
Three New Fields—Nome, Hawkinsville and Angleton Are Promising .....June 22 75
Lafitte Extended—Flank Producer Finds Oil Higher Than Other Wells.....July 6 65
Rodessa Productive Area Projected West and North....July 6 66
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Pelican Sold—Tide Water Buys Rodessa "Trouble" Lease .....July 27 8
Further Westward—Rodessa 14 Miles Wide and Ends Look Favorable .....Aug. 3 70
Rodessa Enlarged on Its Southwestern Edge.....Aug 10 89
Opening New Field—St. Mary Parish Test Has Good Indications .....Aug. 17 78
Rodessa Operators Combine to Eliminate Gas Wastage .....Aug 17 9
Two Miles Southwest—Rodessa Production Area Over 16 Miles in Length .....Aug. 24 66
Hogg Test Hits—Good Showing Miocene Oil in St. Mary Wildcat .....Sept. 7 77
Jennings Comes Back—Old Coastal Field Adds Substantial New Reserve .....Oct. 5 72
Sligo Well Makes 20 Barrels Per Hour in Bossier Parish Gas Area .....Oct. 19 82
South Jennings Prospect Yields Gas and Gasoline.....Nov. 16 76
North Extension Producer Moves Rodessa 1½ Miles Nearer Arkansas .....Dec. 7 80
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New Michigan Area—Wildcat Producer Is Eight-Mile Extension .....July 27 79
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Lea Wildcat Shows—Northwest Test Again Deemed Promising .....Jan. 20 61
New Strikes and Extensions Add to New Mexico Reserves .....Jan. 27 53
H. H. King
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Big Wilcox Well at Billings Leads Oklahoma Developments.....Feb. 17 56
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Logan Wildcat Flowing Sixty Barrels Per Hour.....Mar. 30 51
Moore Extended—New Well Is Deeper and Flows Oil With Gas.....April 6 57
Fox Simpson Discovery Well Rated Up to 8000 Barrels.April 13 56
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Oklahoma City Gets Additional Limitations.....June 8 49
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Lincoln County Wildcat a Hunton Lime Producer.....July 13 135
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New Colorado Field—50 Barrels Hour Flow Reported in Park County.....April 20 141
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Third Talco Well Will Extend Field Nearly a Mile....April 27 53
Talco Completion Gives Field Length of Four Miles....May 18 182
Talco Salt Water Show Halts Work Pending Further Test.....June 29 66
Rodessa-Talco Oils Present Refining Problems That Require Modern Plants.....June 22 10
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Rusk Revival—Test Two Miles From Producer Reports Show.....June 29 66
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Woodbine Productive in a Houston County Test.....July 6 57
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Talco Extension Test 1¼ Miles Westward Has Hole Full of Oil.....Aug. 3 61
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Magnet Productive—Texas Crusader-Cockburn Test Flows 5 Barrels Per Hour.....Sept. 7 75
World's Deepest Commercial Well—Old Ocean Field of Texas Yielding Production From Depth of 9965 Feet.....Sept. 21 16
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Jack County Well Does 100 Barrels in 13 Hours.....Jan. 13 56
Texas Panhandle Work in 1935 Shows Gain.....Jan. 27 164
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Gauge on Test in Young County Is Encouraging.....May 4 47
Jack Wildcat Shows—Bryson Extension 300 Feet Shallower Than Field.....June 8 51
New Fields and Extensions Feature of Several Central Counties.....June 15 82
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Squeaks from the Bull Wheel

An honest burp I do not fear
No e'en an awkward stumble,
But how I cringe when'er I hear
My stomach start to grumble.

A Clean Sweep

Full of enthusiasm, she had gone in for politics, and was out of the house most of the day. The other night she returned at 9 o'clock and sank into an armchair.

"Everything's grand," she said. "We're going to sweep the state."

Her husband looked around wearily and said, "Why not start with the dining room?"

Lyric

I found something very absorbing on your desk.

Indeed; one of my poems, I presume.

No; a piece of blotting paper.

Collegiate Ideal

She isn't near to beauty;
She's not so much for fun,
But when the game is over
She never asks "Who won?"

Flat!

"What are you here for?"

"Burglary, boss!"

"Where did this burglary occur?"

"Ah busted into a flat, suh!"

"Now why would a sensible fellow like you break into a flat?"

"Well, boss, you see ah was flat mah self!"

Same Fix

You know, my husband plays the organ.

Well, if things don't improve, my husband will have to get one, too.

Lost and Found

"Has anybody ever been lost in crossing here?" asked a timid woman, who had hired a boatman to ferry her across a river.

"No'm," was the reply. "Mah brotheh was drowned heah last week, but we found him the nex' day.

Masterful Barrel

"Hoskins, the cook advises me that you were badly intoxicated last night, and that you were trying to roll a barrel out of the basement. Can this be true?"

"Yes, my lord."

"And where was I, during this time?"

"In the barrel, my lord."

Fruits of Dishonor

Daddy, do they raise political plums from seed?

No, young man. Political plums are more often the result of a bit of clever grafting.

Too Hot

"Can you tell me what happened after Napoleon mustered his army?"

"Yes, sir. He peppered the enemy and took the citadel by assault."

Primary Geography

"Now can anybody tell me where we find mangoes?"

"Yes, wherever woman goes."

Slow Dog

"How did you come out at the dog race? Did your dog win?"

"No, he was left at the post."

Nurse's Gone

Wife: "The new nurse is very scientific. She never lets anyone kiss the baby while she is around."

Husband: "Who would want to?"

Repartee

"Nora, was the butcher boy impudent again when you telephoned your order this morning?"

"Sure, but I fixed him this time. I sez, 'Who the hell do youse think yer talkin' to? This is Mrs. Ritz talkin'.'"

A Building Boom

"Whatda you mean, it's easy to start a town these days?"

"Just build a filling station and a store as a decoy. In a few weeks there will be forty more filling stations and forty branches of chain stores."

Manners Vs. Manors

The aged Earl of Suffix was an absent minded old chap.

"You have several fine estates, I believe," said the Duchess of Wappinger. "Would you mind telling me where they are?"

Unfortunately, at this moment the earl's absent mindedness asserted itself. He sat without answering, a silly smile on his face.

The duchess repeated her request. Still the earl paid no attention, simply nodded his head, and smiled vacantly.

Her ladyship became flustered. Just as the earl's wife came near them she raised her voice and asked the question a third time.

Lady Suffix sensed the situation at a glance. She approached her silent husband and laid an indulgent hand on his shoulder.

"Come, dear," she smiled. "You are forgetting your manors."

Fame

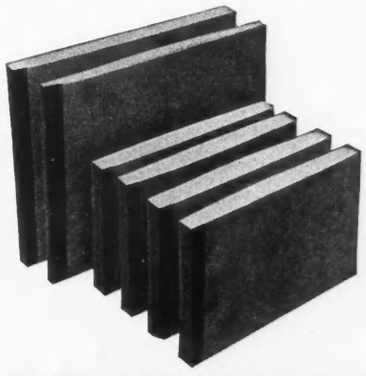
"One day I woke up and found myself famous, and—well, there you are."

"You're sure you don't mean you found yourself famous and then woke up."

Fortunate

The new reporter wrote his concluding paragraph concerning the murder as follows:

"Fortunately for the deceased, he had deposited all his money in the bank the the day before. He lost practically nothing but his life."



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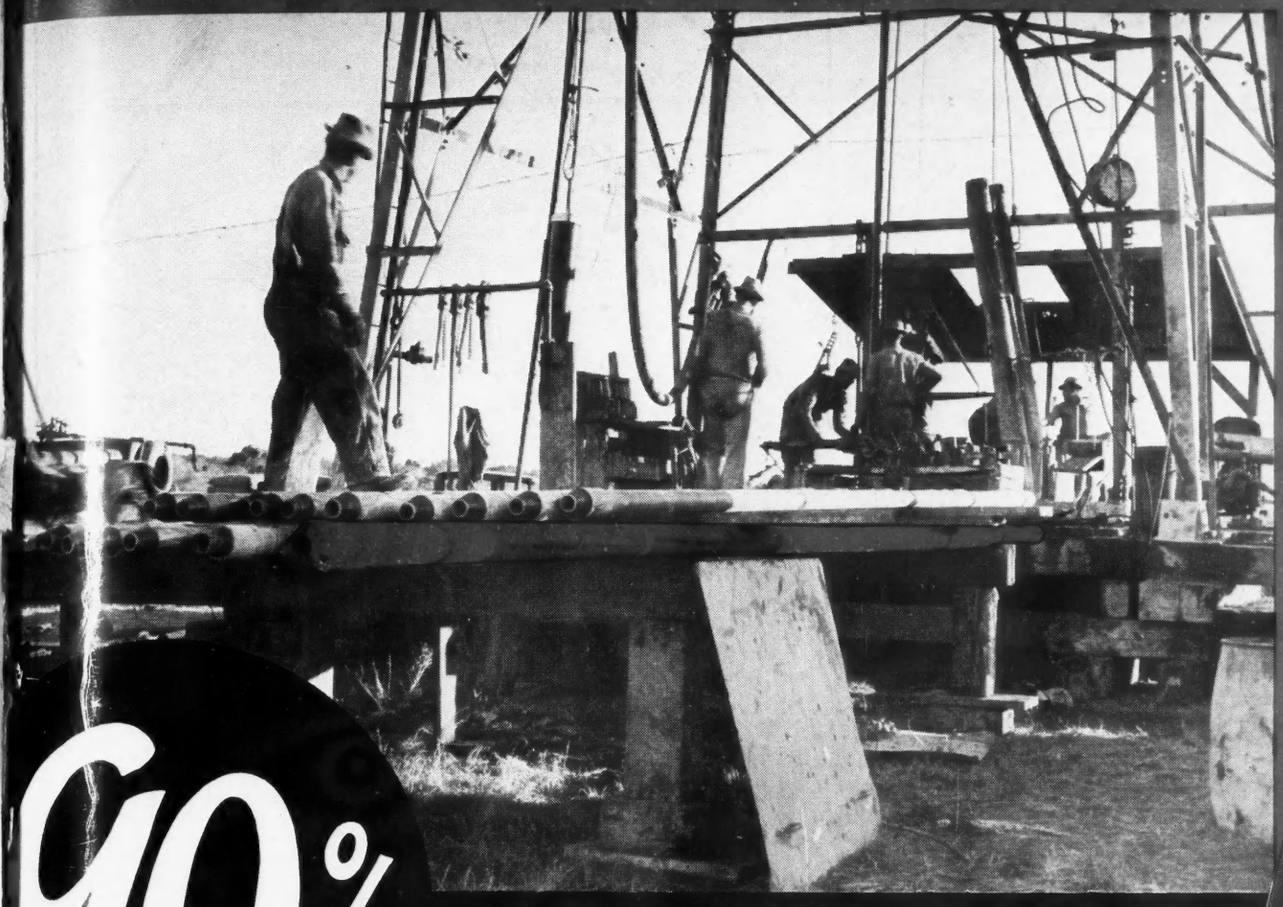

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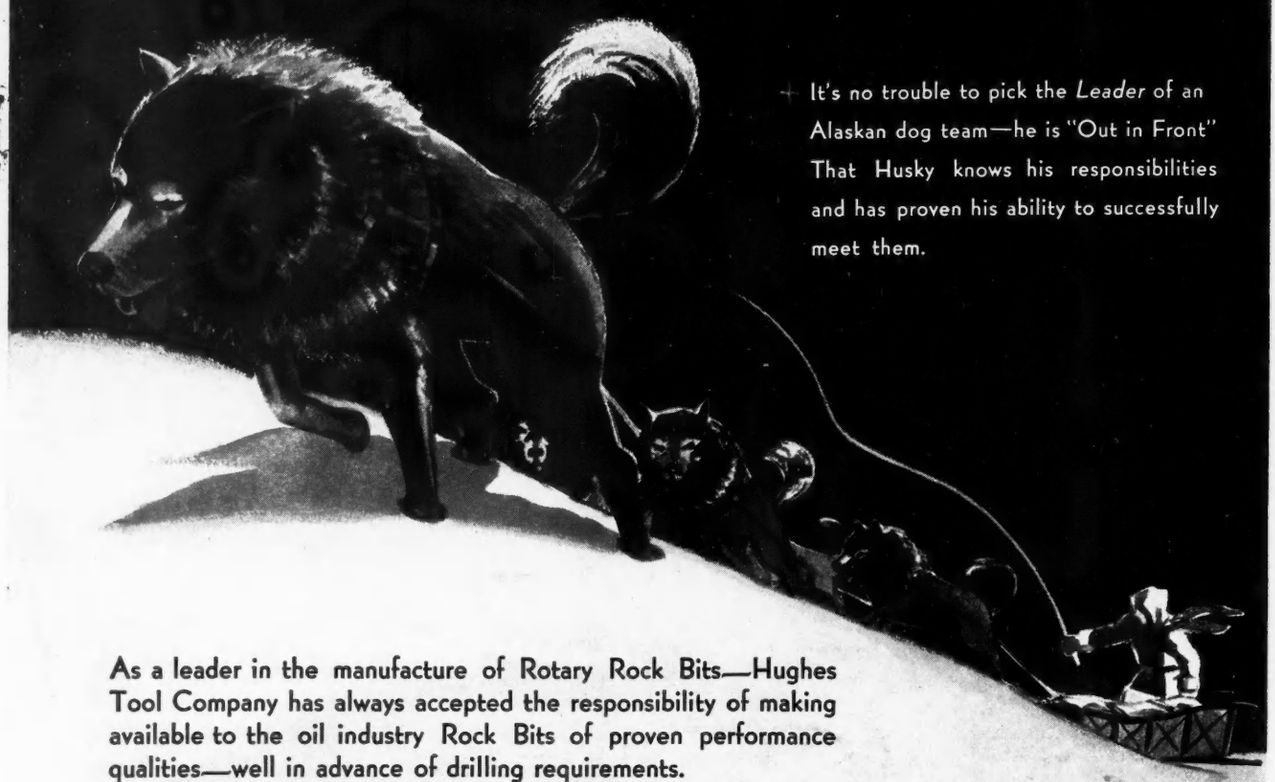

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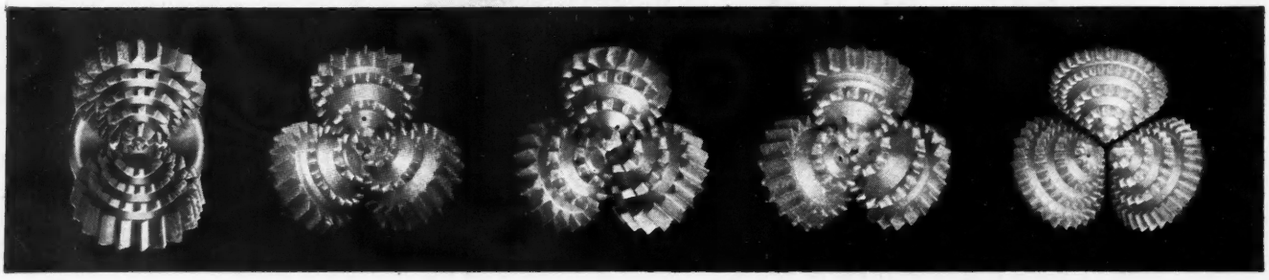
Today—Hughes "TAILOR-MADE" Rock Bits have earned a position far "Out in Front"—in making hole with greatest speed and economy. They are especially designed for specific formations—drilling weights and rotary speeds. Of course, they give "Out in Front" results.

HUGHES TOOL COMPANY, HOUSTON, TEXAS, U.S.A.